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16. ABSTRACT

A study of oxidant transport was conducted in New England over a 6-week period, from July 15 to August 22, 1975. A well equipped mobile laboratory was set up at a rural Connecticut airport, and a long-range, twin-engine airplane was outfitted for wide area and vertical aerial sampling. The mobile laboratory was equipped to continuously monitor O_3, NO, NO_2, NO_x, CH_4, C_2H_2, C_2H_4, C_2H_6, non-methane hydrocarbon, fluorocarbon 11 (F-11), CCl_4, CO, temperature, solar intensity, relative humidity, wind speed, wind direction, and barometric pressure. The airplane was outfitted to continuously monitor ozone, nitric oxide, and temperature and to collect air samples in Tedlar bags. The bag samples were analyzed for Fluorocarbon 11 (F-11), CH_4, NMHC, CO, C_2H_2, C_2H_4, C_2H_6, and CCl_4. Forty-four monitoring flights were conducted during the field study; each flight averaged approximately 3 hours and cover between 400-500 miles. Flights were also made to Ohio, Canada, and 250 miles out over the ocean. The experimental methods used during the study are described and the compiled data are presented.

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November 1976

THE TRANSPORT OF OXIDANT BEYOND URBAN AREAS
Compilation of Data for the New England Study, 1975

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SECTION I

INTRODUCTION

In recent years elevated ozone concentrations have been observed in many rural areas which were previously thought to be relatively immune from the symptoms of photochemical smog. The finding of ozone in rural atmospheres, far from the generally accepted sources of photochemical smog precursors (i.e., urban areas), has very important implications in terms of the strategies devised to control smog formation. Since certain strategies for the control of ozone can have rather harsh economic consequences, it is important that the strategies be conceived with a thorough understanding of the origins of both rural and urban ozone.

In order to improve our understanding of the formation and movement of ozone in the lower atmosphere, Battelle-Columbus has been conducting research in urban and rural environments under the auspices of the U.S. Environmental Protection Agency. The first year of our studies dealt with the formation and transport of ozone in the Ohio Valley. A comprehensive final report[1] is available on that program. This current report concerns the second year of our studies in which ozone formation and transport were investigated in the New England area. Since several contractors and agencies were involved in the New England Oxidant Transport Study and all wish to make use of the data as rapidly as possible, this initial report will convey the data from our 1975 studies, with only minimal interpretation and comment, to those who have an immediate need for the data. We expect that a final report which discusses the interpretation of these data will be available in several months.

SECTION II

PROGRAM SCOPE

The 1975 New England Oxidant Transport Study involved several research groups situated throughout New England. Battelle-Columbus' base of operations was located at a small rural airport near Simsbury, Connecticut. The study was conducted over nearly a 6-week period, from July 15 to August 22, 1975.

In order to investigate oxidant formation and movement in the New England area a heavily instrumented mobile laboratory was set up at the Simsbury, Connecticut, airport and a fairly long-range twin engine aircraft was outfitted for vertical sampling.

The Battelle-Columbus mobile laboratory was equipped to continuously monitor O_3, NO, NO_2, NO_x, CH_4, C_2H_6, C_2H_4, C_2H_2, NMHC, Fluorocarbon 11 (F-11), CCl_4, CO, temperature, solar intensity, relative humidity, wind speed, wind direction, and barometric pressure.

The aircraft was outfitted for continuous ozone, nitric oxide, and temperature monitoring. However, electrical problems permitted us to make continuous nitric oxide measurements only on selected flights. The aircraft was also set up for collection of air samples in Teflon bags. The bag samples were returned to the mobile laboratory after each aircraft flight and immediately analyzed for Fluorocarbon-11 (F-11), CH_4, NMHC, CO, C_2H_4, C_2H_2, C_2H_6, and CCl_4. Forty-four monitoring flights were conducted during the field study, each flight averaging approximately 3 hours and covering between 400-500 miles. Besides covering New England, flights were also made to Canada, Ohio, and 250 miles out over the ocean.

The large volume of data collected during the field study is assembled here. The data from the mobile laboratory are presented in time-dependent profile form, while the horizontal aircraft data are mapped and the vertical aircraft data are profiled. Subsequent reports will discuss the analysis and interpretation of these data in statistical, graphical, chemical, and meteorological terms.

SECTION III

SITING

The general location selected for this study was the southern New England region shown in Figure 1. The topography of southern New England is shown in the relief map in Figure 2. The Battelle-Columbus base of operations was located at a small rural airport near Simsbury, Connecticut. Our Simsbury site was approximately 23 kilometers northwest of Hartford, Connecticut, and about the same distance southwest of Springfield, Massachusetts. Both Hartford and Springfield are located within the Connecticut River Valley, a broad flat plain 400-600 feet below the surrounding countryside. Our Simsbury site was located in a shallow valley adjacent to the Connecticut River Valley and separated from it by hills 200-300 feet above the valley floors. Due to the prevailing southwesterly and westerly wind direction, the Simsbury location was rather well isolated from the Hartford and Springfield urban plumes. The area to the southwest, west, and northwest of the Simsbury site is quite rural in character. The elevation of the Simsbury airport is 210 feet MSL (above mean sea level).

The Battelle-Columbus mobile laboratory was located on Simsbury airport property approximately 50 feet from the runway. As mentioned earlier, the airport is small and is maintained almost exclusively for light private planes. The aircraft traffic at the airport was consequently very light. The airport is surrounded by woods, fields, and tobacco fields. There are several tobacco curing barns within a few miles radius of the airport.

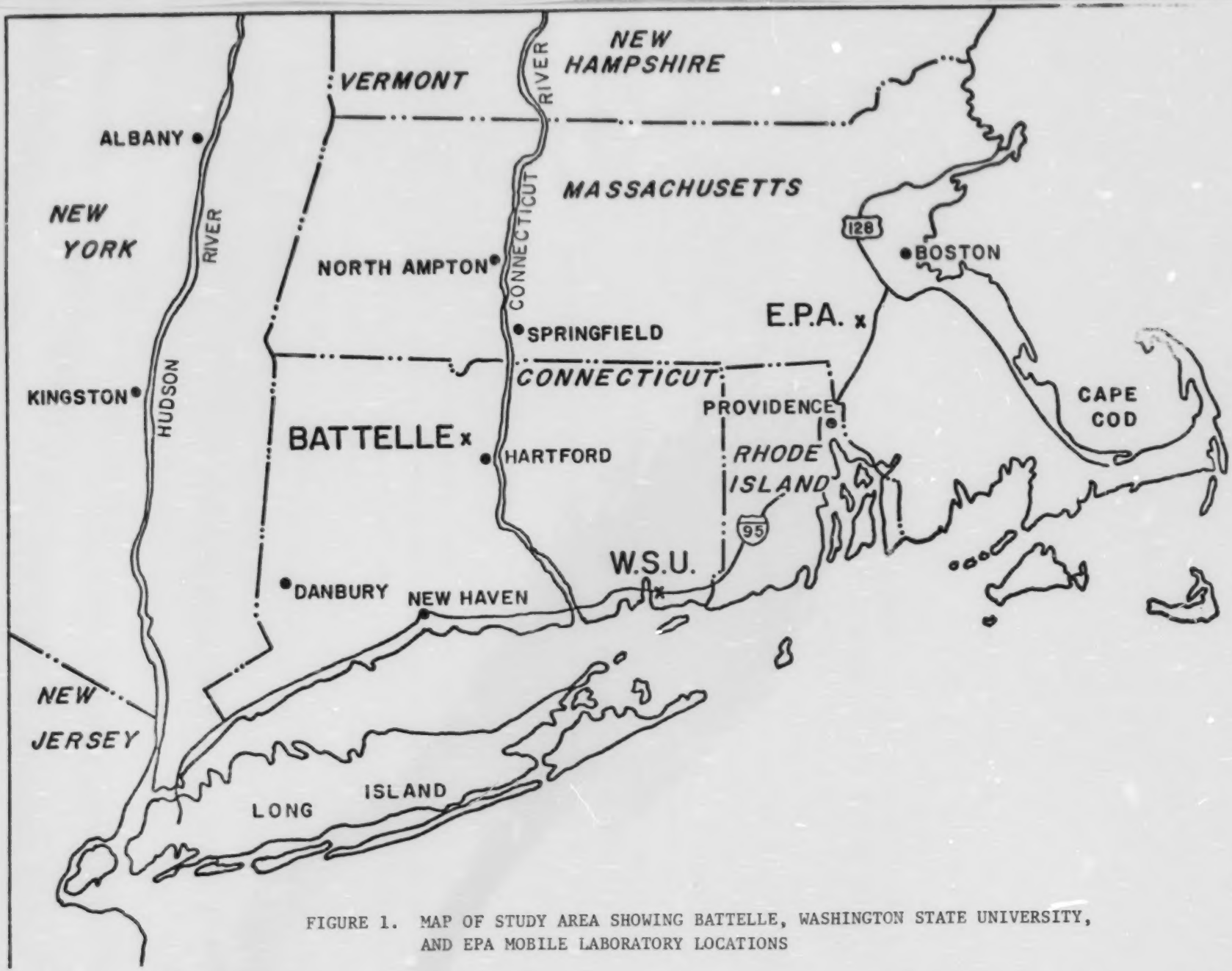


FIGURE 1. MAP OF STUDY AREA SHOWING BATTELLE, WASHINGTON STATE UNIVERSITY, AND EPA MOBILE LABORATORY LOCATIONS

FIGURE 2. TOPOGRAPHICAL MAP OF THE STUDY AREA

SECTION IV

EXPERIMENTAL METHODS

The Battelle-Columbus mobile laboratory used for this study is pictured in Figures 3a and b. It was employed as our base of operations in Simsbury, Connecticut, and contained instrumentation for monitoring meteorological conditions, solar irradiation intensity, and gas-phase composition. The instrument outputs (except the gas chromatographs) were recorded on a multipoint recorder and also on magnetic tape cartridges after conditioning by a Westinghouse data acquisition system. The magnetic tapes were sent to Westinghouse for conversion to engineering units and transfer to a computer-compatible 7-track tape. This tape was read into Battelle's CDC-6400 computer, where the data were further processed and permanently stored on magnetic tape. The gas chromatographic outputs were manually deduced and fed into the computer on cards. These data were also conditioned, integrated with main data set, and permanently stored on magnetic tape.

A computer program was used to average all analyses and plot the results as 24-hour profiles.

The chemical and meteorological variables which were determined within the mobile laboratory during this study are discussed in the next sections.

Meteorological Measurements

The Battelle-Columbus mobile laboratory makes use of an automated MRI, Inc., Model 1071 Weather Station for monitoring temperature, relative humidity, wind speed, and wind direction. The laboratory also employs an Eppley Laboratory, Inc., 180° pyrheliometer to determine global radiation (total sun and sky). A recently calibrated aneroid barometer was used to determine atmospheric pressure. The various meteorological instruments are listed in Table 1.

Laboratory and newspaper records were kept of general weather conditions. National Weather Service and NOAA maps were obtained to document regional precipitation, temperature, and frontal activity.

FIGURE 3a. INTERIOR OF AIR QUALITY LABORATORY

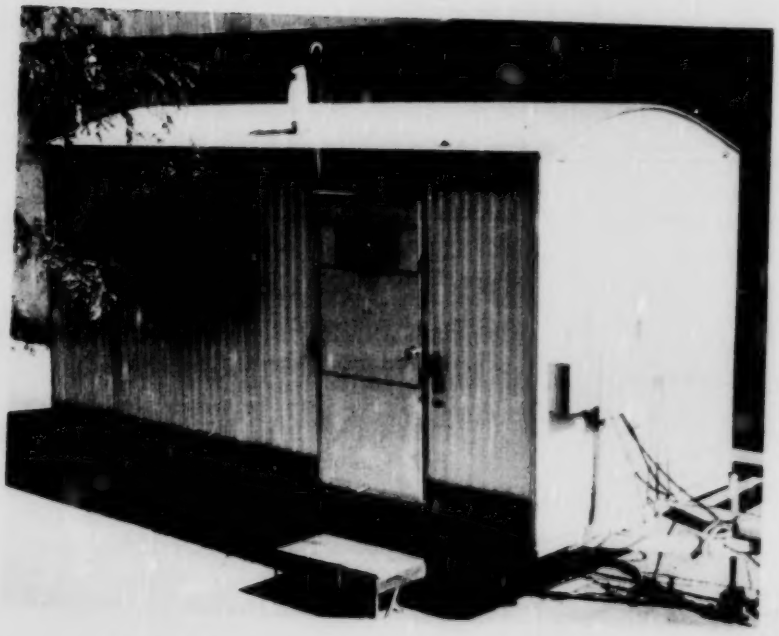


FIGURE 3b. MOBILE AIR QUALITY LABORATORY

TABLE 1. METEOROLOGICAL MEASUREMENTS

Analysis	Instrument
Wind Speed and Direction	MRI, Model 1074-2 sensor
Temperature	MRI, Model 802 sensor
Relative Humidity	MRI, Model 907 sensor
Solar Radiation Intensity	Eppley Lab, 180° pyrheliometer

Air Quality Measurements

The instruments used for air quality monitoring are listed in Table 2. Air samples were pulled into the mobile laboratory by a high capacity blower through a Pyrex manifold which extended above the sampling station. Short lengths of Teflon tubing connected the instruments to the sampling manifold.

A discussion of the procedures used in this program for monitoring the various gas-phase species follows.

TABLE 2. AIR MONITORING INSTRUMENTATION

Specie	Instrument
O_3	REM, Model 612 Chemiluminescence Monitor
NO NO_x NO_2 (by difference)	Bendix, Model 8101-B Chemiluminescence Monitor
CH_4 NMHC CO	Union Carbide, Model 3020 Automated FID gas chromatograph
C_2H_2 C_2H_4 C_2H_6	Varian Series 1200 gas chromatograph with flame ionization detection
CCl_3F (Fluorocarbon-11) CCl_4	Varian Series 1200 gas chromatograph with electron capture detection

Ozone

Ozone determination is based on the detection of the chemiluminescence from the reaction of O_3 with excess ethylene. Peak intensity from this reaction is in the 4000-4500 A region. The technique is thought to be free from major interferences. The sensitivity of the instrument used for this study is about 0.001 ppm. A heated Hopcalite catalyst bed was used to destroy the ethylene effluent from this instrument. The instrument was zeroed several times each day and was calibrated frequently during the study. Dynamic calibrations were performed with two McMillan Electronics Corporation ozone generators which were themselves calibrated by the neutral buffered KI procedure at the beginning and end of the field study. Two ozone generators were employed to crosscheck one another to assure us that ozone generator drift was not occurring. The calibration of our ozone monitor was also checked several times during the study by a quality control team from Region I EPA. The agreement between the Battelle-Columbus and Region I EPA calibrations was excellent. These calibration checks will be the subject of a separate report[2].

$NO-NO_2-NO_x$

The instrument used for nitrogen oxide determination employs the reaction of nitric oxide with excess ozone for the generation of infrared (1.2 μ peak) chemiluminescence. The infrared radiation passes through a filter and is detected by a sensitive photomultiplier tube. Noise from the photomultiplier tube is reduced by cooling the tube to subambient temperatures. The instrument used here has a sensitivity of 0.005-0.010 ppm and is linear over a range of 0.005-5.00 ppm. Activated carbon is used to remove ozone from the instrument's exhaust gas.

The chemiluminescent technique works quite well for nitric oxide, with no interferences having been documented. The determination of nitrogen dioxide by chemiluminescence requires initially a reduction of NO_2 to NO with subsequent NO determination as described above. A carbon catalyst

operated at 260 C has been employed during this study to reduce NO_2 to NO. The efficiency of this converter is excellent--i.e., greater than 99 percent as measured before and after the field program.

The chemiluminescent instrument was zeroed and calibrated frequently during the field study. A National Bureau of Standards permeation tube was employed for NO_2 calibration while a cylinder of NO in N_2 (certified by O_3 titration) was used for NO calibration.

Methane, Nonmethane Hydrocarbon, Carbon Monoxide

An automated flame ionization gas chromatographic procedure was used to monitor CH_4, THC (and NMHC by difference), and CO. The air sample is split into two parts within the instrument, with one half proceeding directly to the flame ionization detector for total hydrocarbon determination, and the second half proceeding to a stripping column. The stripping column passes only CH_4 and CO (the remaining hydrocarbons are adsorbed and later backflushed) which are then separated on a chromatographic column. The CH_4 and CO then pass through a N reduction catalyst which converts CO to CH_4. Both CH_4 and CO (as CH_4) are then determined by the flame ionization detector. One complete sample is automatically analyzed every 5 minutes. Calibrations were carried out with a certified cylinder of CH_4 and CO in nitrogen. The hydrocarbon standard was verified by crosschecking it against a National Bureau of Standards primary standard "propane in air" mixture.

Acetylene, Ethylene, Ethane

A flame ionization gas chromatograph equipped with a Porapak Q/ Porapak N packed column was used to separate and quantitate the C_2 hydrocarbons and propane. The instrument was operated isothermally at 50 C using high-purity nitrogen and hydrogen and ultra-high purity air. The sample volume was 5 ml. Span gases prepared from the actual C_2 hydrocarbons and referenced to a NBS hydrocarbon standard were employed for daily calibration. An analysis was run every 15 minutes with the data being quantitated and averaged manually on site.

Only minimal gas chromatographic hydrocarbon data are available during the first 2 weeks of the study due to a sudden power outage which occurred 2 hours before the start of the experimental program on July 15, 1975, and which caused irreparable damage to one of the gas chromatographic

instruments. A replacement instrument was obtained from Battelle's Columbus Laboratories and used throughout the remainder of the study. On 2 days during the field study an 18-foot Durapak column was installed in the gas chromatograph (at 0° C) to enable us to determine the C_4 hydrocarbon concentration.

CCl_3F (Fluorocarbon-11) and CCl_4

F-11 and CCl_4 were monitored during the program by a gas chromatograph equipped with an electron capture detector. A 6' x 1/8" stainless steel column packed with Porapak Q and operating at 140 C was employed for separation. The detector was maintained at 150 C. A carrier gas flow rate of 25 cc/min of filtered O_2-free nitrogen was used. Sample volume was 1 cc. Fluorocarbon-11 and CCl_4 are separated from other atmospheric constituents under these conditions. Chloroform was occasionally observed in the chromatogram during the field study, however, the chloroform concentrations were always very low and were not quantitated.

F-11 and CCl_4 calibration standards were obtained from Dr. Hal Westberg of Washington State University. The calibration standard consisted of a stainless steel cylinder of pressurized ambient air for which the F-11 and CCl_4 concentrations had been determined by a gas chromatographic-mass spectrometric technique.

Aircraft Measurements

A Piper Aztec twin-engine aircraft and the full-time services of a pilot were rented for this study. The aircraft is pictured in front of the Battelle-Columbus mobile laboratory in Simsbury, Connecticut in Figure 4. Three of the rear seats of the six-passenger plane were removed and an instrument rack erected in there place. A fourth rear seat was reversed so that it faced the instrument rack. A picture of the instruments and rack positioned within the plane is shown in Figure 5.

Ram air was supplied to the instruments through a stainless steel sampling probe located approximately 1 foot past the nose of the aircraft (and well in front of the prop and engine backwash). The sampling probe, shown in Figure 6, was connected to an all-Teflon manifold on the instrument rack by flexible Teflon tubing. The residence time within the sample tubing was less than 6 seconds. Most of the ram air was exhausted from the manifold through a vent at the rear of the plane. A small fraction of the flow was

FIGURE 4. AIRCRAFT AND MOBILE LABORATORY AT SIMSBURY, CONNECTICUT

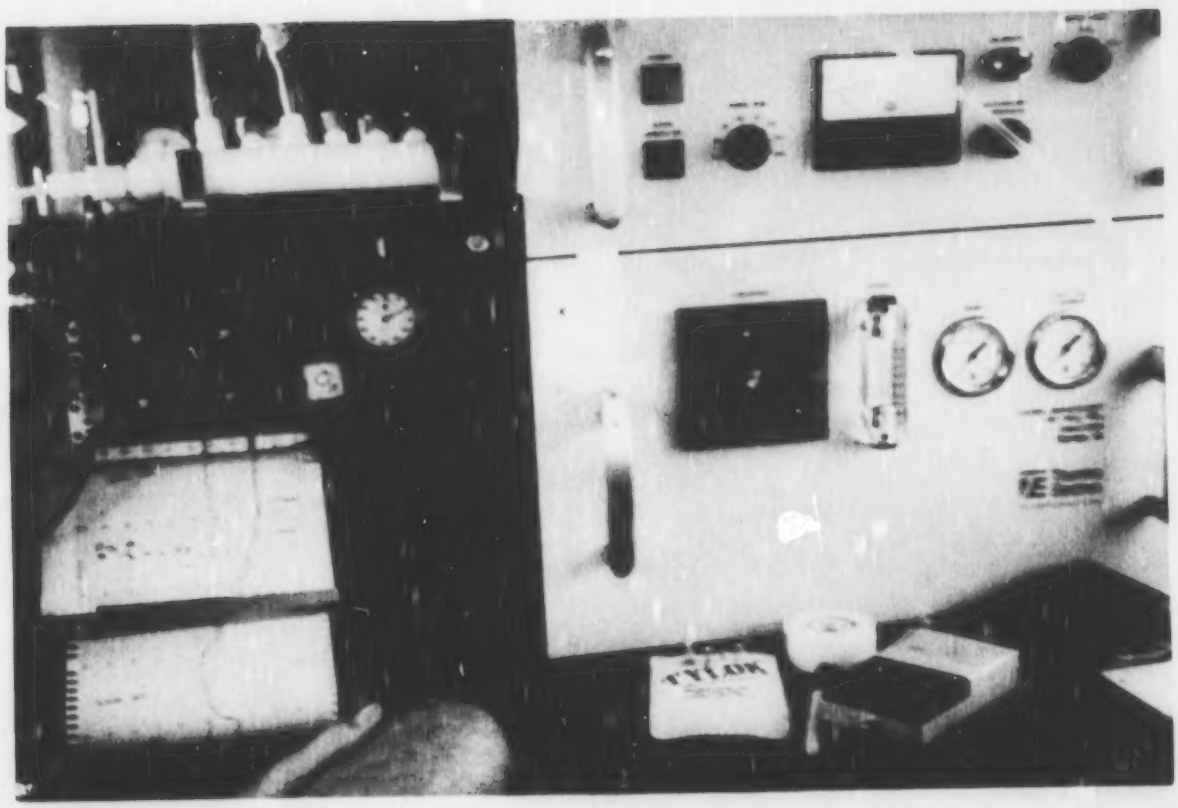


FIGURE 5. PARTIAL VIEW OF MONITORING INSTRUMENTS WITHIN AIRCRAFT

FIGURE 6. AIRCRAFT SAMPLING PROBE

provided to a REM, Inc. chemiluminescent ozone monitor and a TECO chemiluminescent nitrogen oxides monitor. The manifold could also be connected through Teflon tubing and stainless steel quick-connect fittings to Teflon or Tedlar air sampling bags. Once filled, these bags were stored in the dark in the luggage compartment of the plane. The bag samples were transferred to the mobile laboratory and analyzed immediately upon the landing of the aircraft. Even after extended use, Tedlar bags used throughout most of the study showed no contamination with respect to the species we monitored, as determined by pumping "zero" air into the bags and analyzing the samples thus collected. After each bag was analyzed it was exhausted through a diaphragm pump, backfilled with "zero" nitrogen, exhausted again, backfilled again, and finally exhausted and sealed for future use. We were able to detect no bag carryover from sample to sample of any of the substances we were monitoring during the study.

The Teflon bags utilized during the first week of the study appeared to show some contamination with respect to F-11 and CCl_4. Their use was discontinued and Tedlar bags were employed throughout the remainder of the study.

Temperature was recorded continuously throughout each aircraft flight using a thermocouple positioned next to the air sampling probe at the nose of the plane, and reference temperature-compensating circuitry.

The monitoring instruments used in the aircraft were frequently calibrated during the study using the same procedures described earlier for the mobile laboratory instruments. The ozone calibration was also checked by the Region I EPA quality control team.

An inverter was used to supply power to two dual-pen recorders along with the two chemiluminescence instruments and their associated pumps. The inverter drew its power from the aircraft battery which in turn was supplied by the two 50 amp generators on the aircraft engines. Although sufficient power was generated by the system to operate the aircraft and all of our monitoring equipment, the charging capacity of the battery was so low that it could not accept current from the generators as fast as the plane and monitoring instruments withdraw it. Thus the battery discharged and we lost radio and navigational power very early into the flights.

Unfortunately FAA regulations prohibited the installation of a larger battery on the aircraft. These problems were circumvented to some extent by only using the heavy current-drawing nitrogen oxides instrument for short periods of time at the start of selected flights (the instrument could not be turned off and on in flight since the pumps cause a power surge which would burn out the inverter). Two batteries were also used so that one was always charging on the ground while the other was in flight.

An electrical switch was arranged for instantaneously changing from aircraft to ground power (via an extension cord to the mobile laboratory) so that it was never necessary to shut down the instrumentation either at night or during takeoffs and landings. Records of time, location, visibility, etc. were kept on the strip chart and on a magnetic tape voice recorder. Flight patterns and other key data were tracked during each flight (using the plane's navigational aids) on a clear plastic overlay map of the study region. The actual flight path was then transferred to a permanent map at the end of each flight.

The vast majority of the aircraft monitoring was conducted at 1000 feet AGL (above ground level), with the exception of the vertical spirals and occasional flights over mountainous terrain.

SECTION V

RESULTS

The purpose of this data report is to present the results of the 1975 field sampling program. Subsequent reports will discuss the interpretation of the data presented here.

All of the mobile laboratory data for the 38 days of sampling will be presented first, together with a summary weather map indicating each day's meteorological conditions. These summary weather maps were obtained from the National Oceanic and Atmospheric Administration. The aircraft flight data and vertical profile results will then be presented for each aircraft flight.

Mobile Laboratory Results - Simsbury, Connecticut

The data from our mobile laboratory ground station in Simsbury, Connecticut, is presented in two tables and several graphs for each sampling day. One table lists the daily average of each variable monitored by the mobile laboratory, together with the number of hourly averages used to compute the daily average. The second table lists the hourly averages throughout the day for each specie monitored. Averages were calculated from hour to hour (e.g., the average concentration between 13:00 and 14:00 hours is the 14:00 hourly average) and are based on Eastern Daylight Time. Negative values in the tables indicate interpolated data. A negative one (-1.000) in the tables indicates no data available over that time interval.

In addition to the above tabulations each day's results are also presented in a series of computer-prepared graphs. The ordinate of each plot is a percentage scale relating to the units indicated for each variable in the graph legend (lower right-hand corner of each plot). The time of day is plotted on the abscissa.

As mentioned earlier, a summary weather map is included along with the mobile laboratory data for each sampling day in order to show frontal activity and other major meteorological phenomena. These weather maps are self-explanatory. The mobile laboratory data and daily weather maps are presented below in Tables 3 through 40 and Figures 7 through 44. (See page ii for comment on the daily weather maps.)

TABLE 3a. JULY 15, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.021	12
2--WIND SPEED (MPH)	4.717	12
3--WIND DIRECTION (DEGREES)	198.885	12
4--TEMPERATURE (CENTIGRADE)	26.706	12
5--RELATIVE HUMIDITY (PERCENT)	68.917	12
6--OZONE (PPM)	0.040	12
7--NITRIC OXIDE (PPM)	0.002	12
8--NITROGEN DIOXIDE (PPM)	0.006	12
9--NITROGEN OXIDES (PPM)	0.008	12
19--FLUOROCARBON-11 (PPT)	182.	10

TABLE 3b.

SUBSTANCE	HOUR AVERAGES FOR JULY 15, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
2--WIND SPEED (MPH)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
3--WIND DIRECTION (DEGREES)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
4--TEMPERATURE (CENTIGRADE)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
5--RELATIVE HUMIDITY (PERCENT)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
6--OZONE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
7--NITRIC OXIDE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
8--NITROGEN DIOXIDE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
9--NITROGEN OXIDES (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	3.650	4.725	3.400	3.375	3.875	2.850	1.875	0.475	0.025	.000	.000	.000
2--WIND SPEED (MPH)	6.800	6.400	4.500	5.000	4.800	6.200	4.700	4.500	3.500	4.900	3.000	2.300
3--WIND DIRECTION (DEGREES)	201.	214.	228.	217.	215.	198.	188.	188.	185.	193.	180.	178.
4--TEMPERATURE (CENTIGRADE)	27.	28.	28.	29.	30.	29.	28.	27.	25.	24.	23.	22.
5--RELATIVE HUMIDITY (PERCENT)	74.	64.	60.	57.	54.	55.	59.	66.	77.	81.	88.	92.
6--OZONE (PPM)	0.038	0.043	0.045	0.047	0.051	0.056	0.054	0.050	0.038	0.030	0.017	0.012
7--NITRIC OXIDE (PPM)	0.003	0.002	0.004	0.001	0.001	0.001	.000	.000	0.001	0.002	0.005	0.009
8--NITROGEN DIOXIDE (PPM)	0.009	0.008	0.006	0.004	0.005	0.003	0.000	.000	0.003	0.004	0.009	0.016
9--NITROGEN OXIDES (PPM)	0.011	0.010	0.009	0.006	0.006	0.003	0.000	.000	0.004	0.006	0.014	0.025
19--FLUOROCARBON-11 (PPT)	-1.	121.	106.	108.	122.	174.	210.	-191.	173.	294.	302.	207.

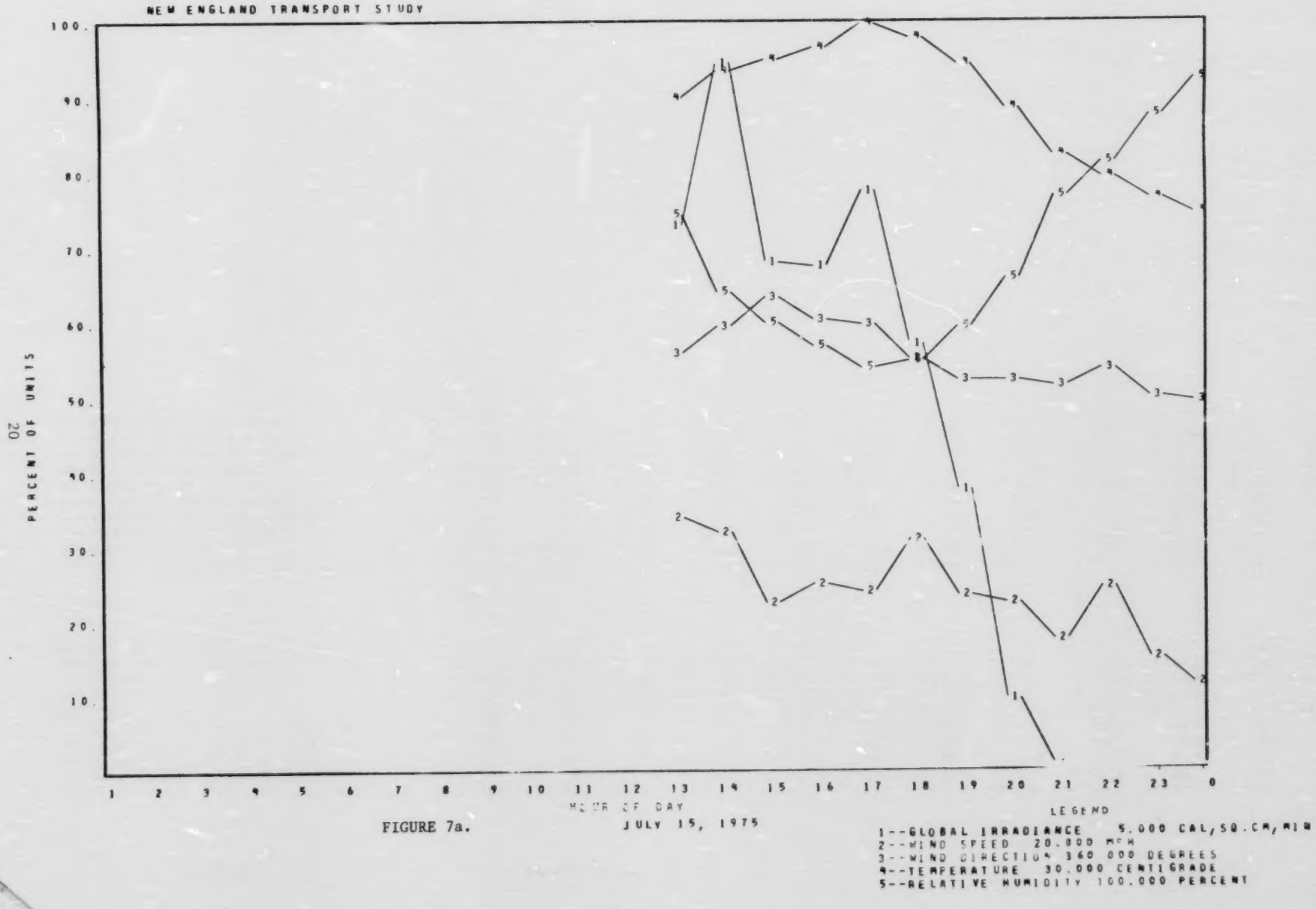
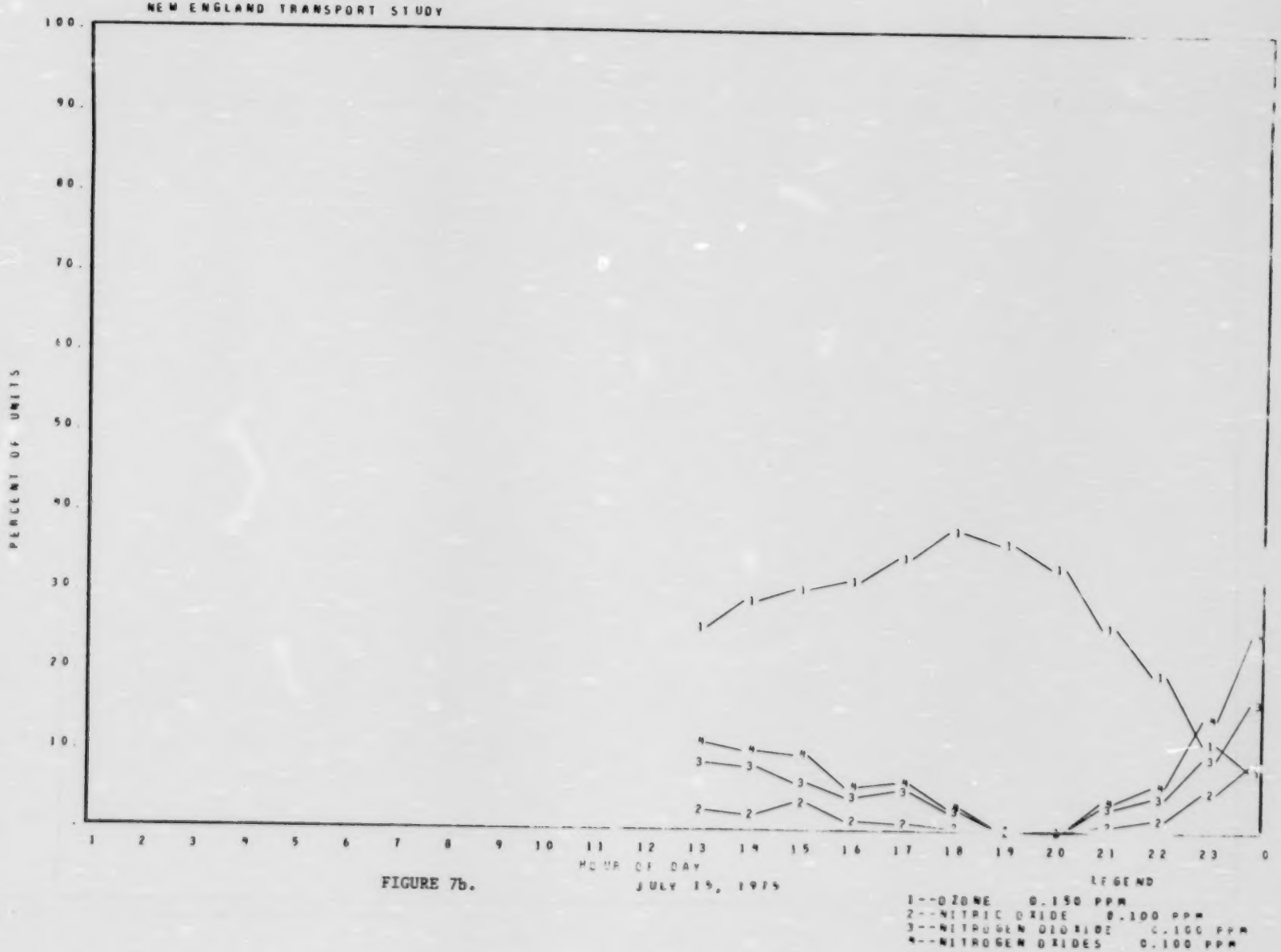

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 15, 1975
LEGEND
1--GLOBAL IRRADIANCE 5.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 7a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 15, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 7b.

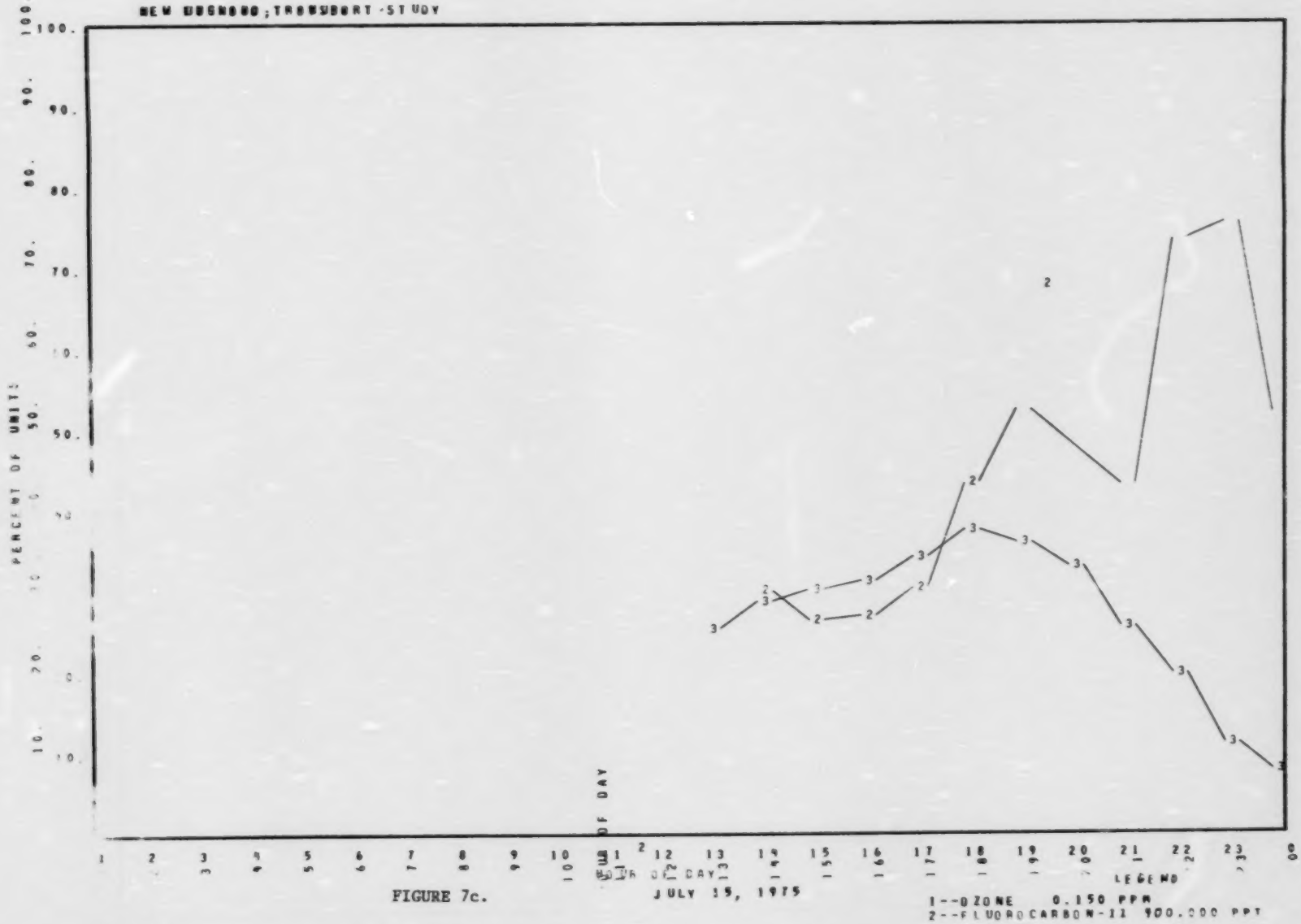

NEW DESIGNED TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
JULY 15, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 900.000 PPT

FIGURE 7c.

FIGURE 7d. TUESDAY, JULY 15, 1975

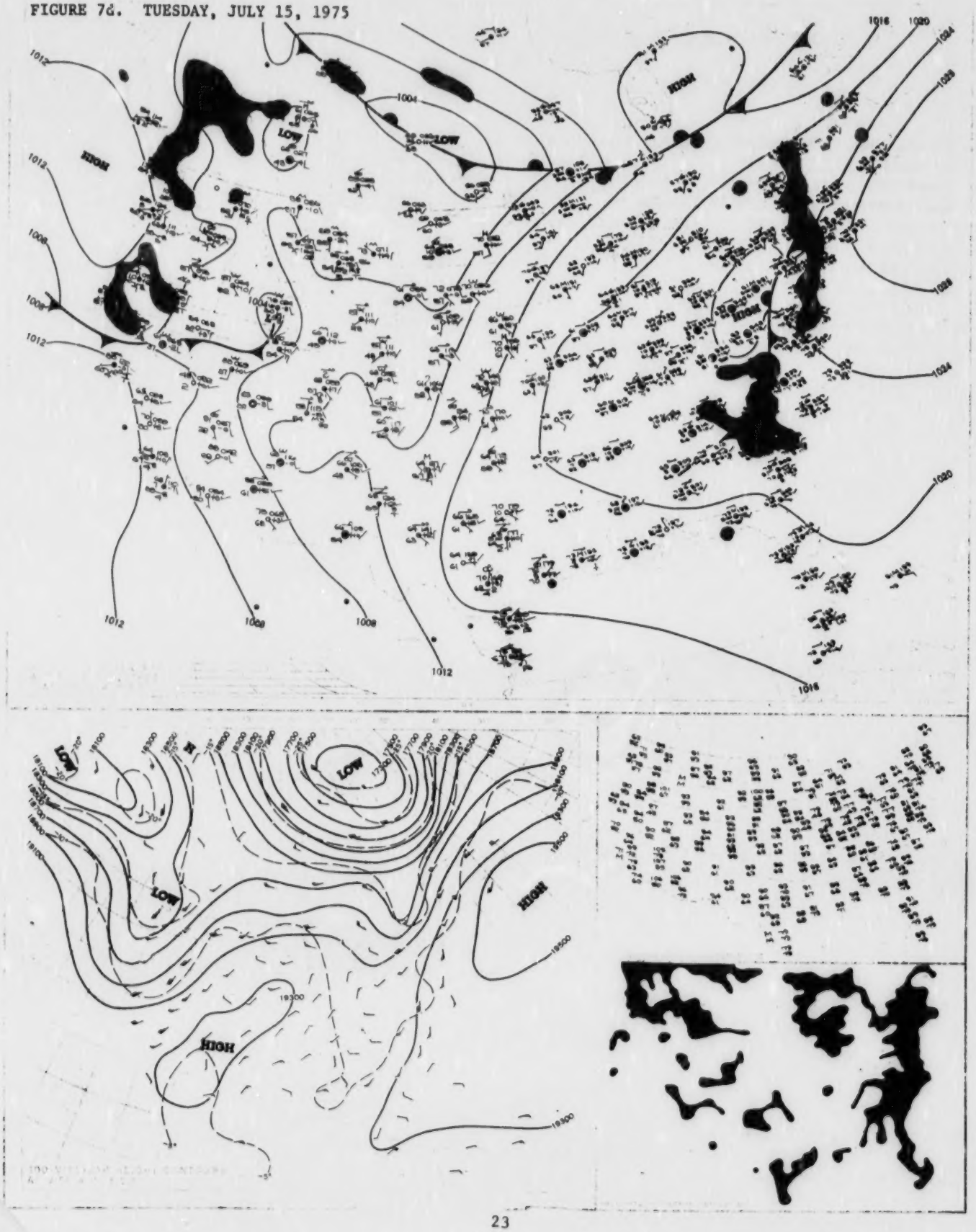


TABLE 4a. JULY 16. 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.915	24
2--WIND SPEED (MPH)	5.554	24
3--WIND DIRECTION (DEGREES)	186.112	24
4--TEMPERATURE (CENTIGRADE)	26.121	24
5--RELATIVE HUMIDITY (PERCENT)	72.633	24
6--OZONE (PPM)	0.025	23
7--NITRIC OXIDE (PPM)	0.005	24
8--NITROGEN DIOXIDE (PPM)	0.009	24
9--NITROGEN OXIDES (PPM)	0.014	24
19--FLUOROCARBON-11 (PPT)	193.	13
20--CARBON TETRACHLORIDE (PPT)	178.	9

TABLE 4b.

SUBSTANCE	HOUR AVERAGES FOR JULY 16, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	0.025	0.350	0.775	2.200	2.650	3.875	4.200	6.375
2--WIND SPEED (MPH)	2.900	2.200	2.000	2.700	2.000	4.100	2.700	3.300	5.700	7.100	7.100	6.300
3--WIND DIRECTION (DEGREES)	150.	182.	176.	189.	182.	175.	198.	185.	188.	184.	185.	186.
4--TEMPERATURE (CENTIGRADE)	23.	23.	23.	23.	22.	23.	23.	24.	26.	27.	28.	29.
5--RELATIVE HUMIDITY (PERCENT)	94.	93.	94.	94.	95.	95.	94.	89.	79.	73.	67.	61.
6--OZONE (PPM)	0.013	0.016	0.017	0.016	0.015	0.014	0.013	0.012	-0.012	0.011	0.011	0.023
7--NITRIC OXIDE (PPM)	0.011	0.011	0.011	0.010	0.009	0.008	0.009	0.009	0.006	0.002	0.002	0.003
8--NITROGEN DIOXIDE (PPM)	0.021	0.023	0.019	0.015	0.012	0.010	0.009	0.007	0.005	0.005	0.005	0.006
9--NITROGEN OXIDES (PPM)	0.033	0.033	0.029	0.025	0.021	0.018	0.017	0.015	0.011	0.007	0.007	0.009
19--FLUOROCARBON-11 (PPT)	218.	-213.	-209.	-204.	-200.	-195.	-191.	-186.	182.	178.	-175.	172.
20--CARBON TETRACHLORIDE (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	195.	-214.	-232.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.450	5.575	4.725	3.975	2.700	1.625	0.425	0.025	.000	.000	.000	.000
2--WIND SPEED (MPH)	7.100	8.200	8.900	8.500	8.400	9.000	8.700	6.100	5.200	5.500	4.900	4.300
3--WIND DIRECTION (DEGREES)	185.	191.	191.	189.	192.	192.	195.	191.	186.	195.	192.	191.
4--TEMPERATURE (CENTIGRADE)	31.	31.	31.	31.	31.	30.	28.	26.	25.	24.	23.	23.
5--RELATIVE HUMIDITY (PERCENT)	52.	48.	47.	46.	47.	51.	55.	62.	70.	75.	80.	82.
6--OZONE (PPM)	0.041	0.051	0.046	0.058	0.069	0.051	0.043	0.024	0.006	0.000	0.002	0.000
7--NITRIC OXIDE (PPM)	0.003	0.003	0.003	0.002	0.002	0.002	0.003	0.002	0.002	0.002	0.003	0.004
8--NITROGEN DIOXIDE (PPM)	0.005	0.006	0.006	0.005	0.006	0.007	0.007	0.007	0.007	0.008	0.008	0.008
9--NITROGEN OXIDES (PPM)	0.008	0.008	0.009	0.007	0.008	0.009	0.010	0.010	0.009	0.010	0.011	0.012
19--FLUOROCARBON-11 (PPT)	169.	163.	167.	172.	182.	202.	193.	-206.	-219.	232.	274.	-1.
20--CARBON TETRACHLORIDE (PPT)	-251.	270.	120.	135.	150.	150.	135.	-115.	-125.	135.	345.	-1.

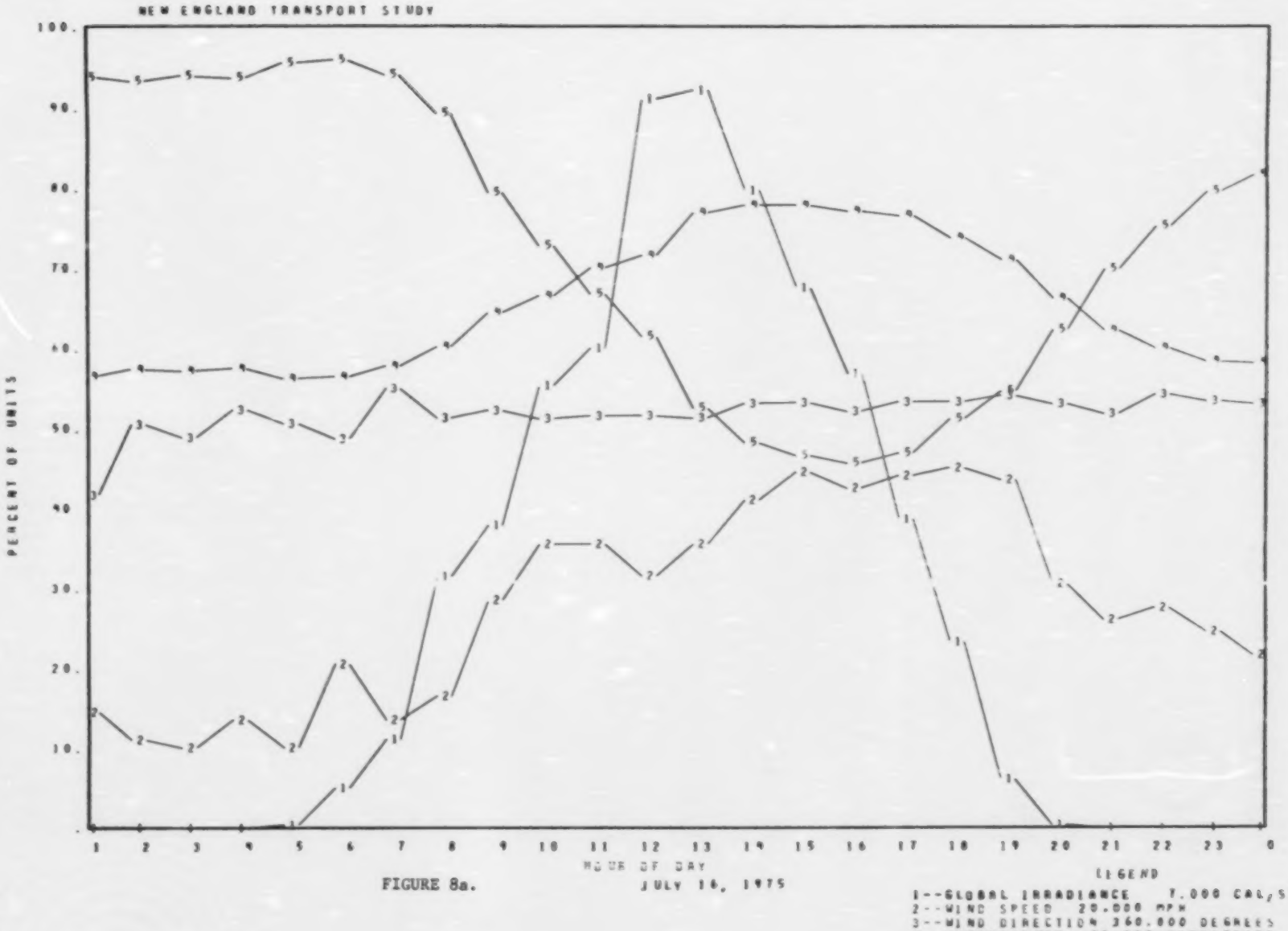

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 16, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 8a.

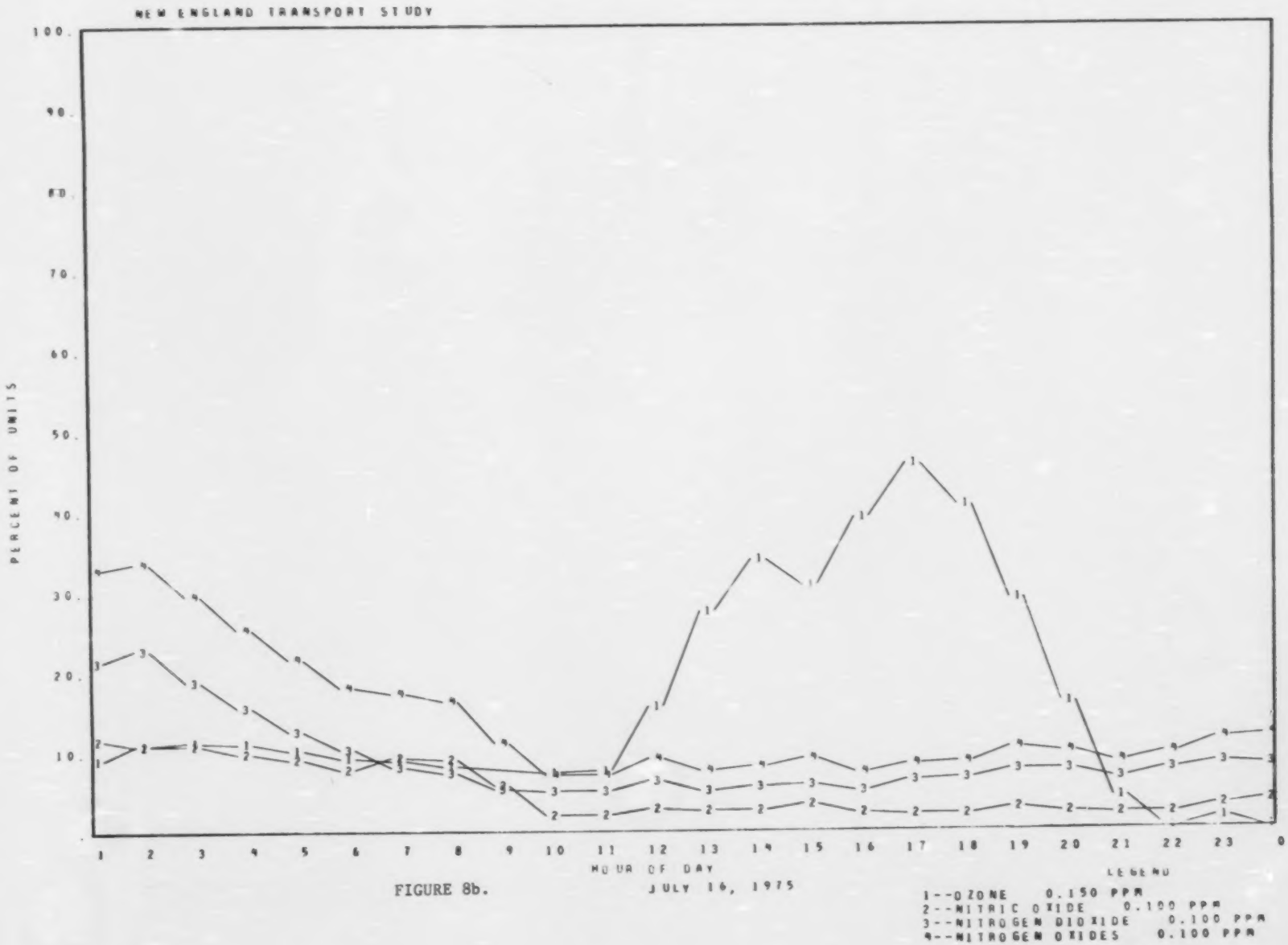

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 16, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 8b.

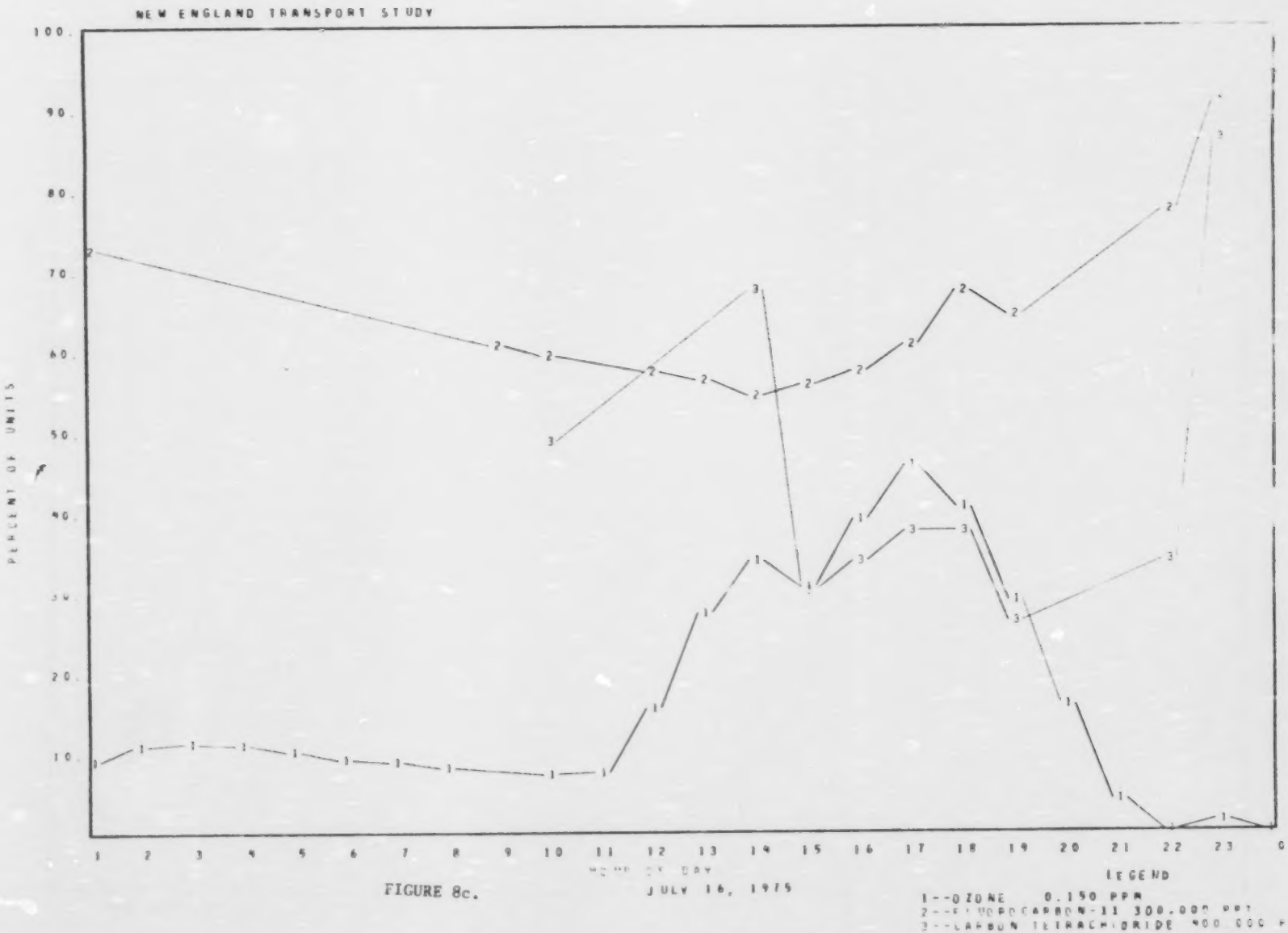
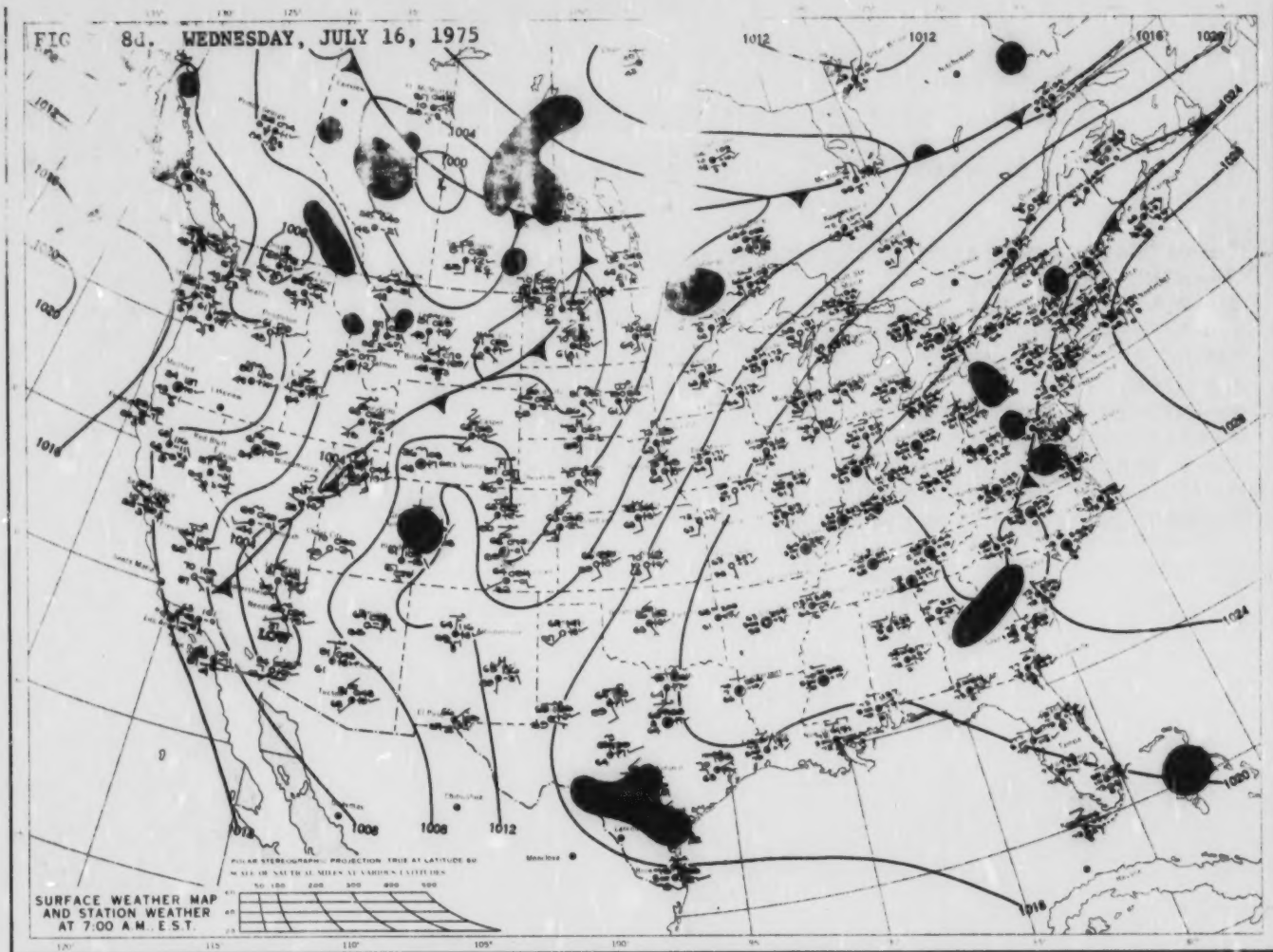
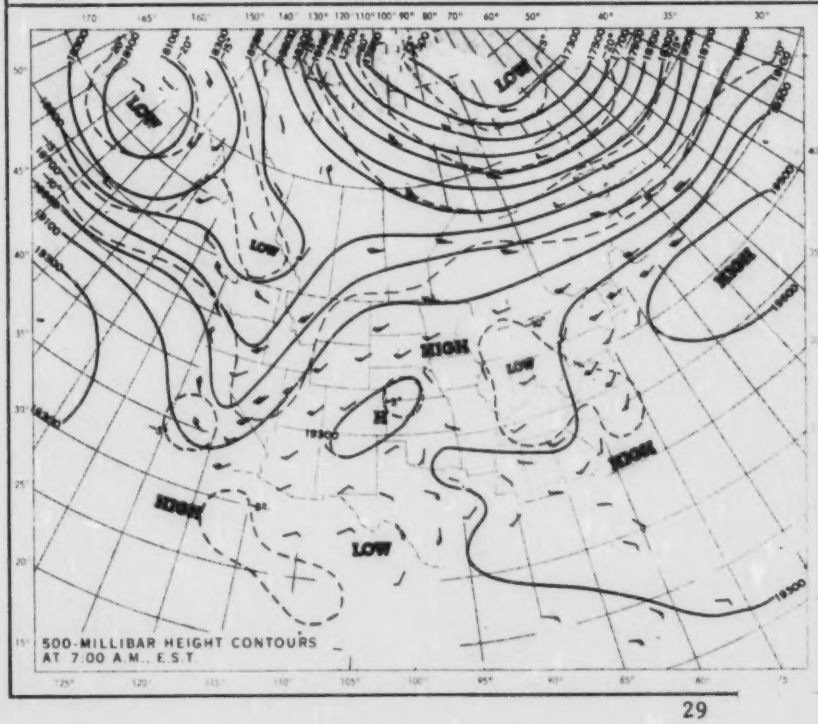

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 16, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 900.000 PPT

FIGURE 8c.

FIG 8d. WEDNESDAY, JULY 16, 1975





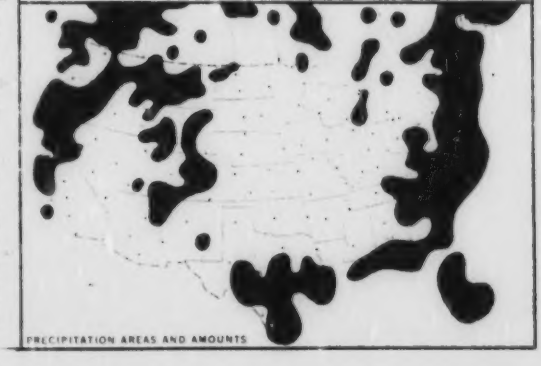


TABLE 5a. JULY 17. 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.141	24
2--WIND SPEED (MPH)	5.308	24
3--WIND DIRECTION (DEGREES)	195.656	24
4--TEMPERATURE (CENTIGRADE)	26.617	24
5--RELATIVE HUMIDITY (PERCENT)	71.121	24
6--OZONE (PPM)	0.038	22
7--NITRIC OXIDE (PPM)	0.005	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.009	24
19--FLUOROCARBON-11 (PPT)	216.	24
20--CARBON TETRACHLORIDE (PPT)	217.	24

TABLE 5b.

HOUR AVERAGES FOR JULY 17, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.500	1.500	3.275	4.075	4.450	6.000
2--WIND SPEED (MPH)	4.400	3.600	3.100	3.900	2.700	1.500	2.400	4.300	5.300	5.500	5.000	5.100
3--WIND DIRECTION (DEGREES)	187.	186.	197.	197.	185.	231.	239.	194.	199.	218.	219.	212.
4--TEMPERATURE (CENTIGRADE)	23.	23.	23.	22.	22.	22.	23.	25.	28.	29.	29.	30.
5--RELATIVE HUMIDITY (PERCENT)	83.	96.	89.	91.	93.	95.	93.	86.	70.	60.	56.	53.
6--OZONE (PPM)	0.001	0.001	0.004	0.003	0.003	0.002	0.005	0.007	0.014	0.020	0.028	0.043
7--NITRIC OXIDE (PPM)	0.004	0.003	0.003	0.003	0.003	0.005	0.008	0.009	0.007	0.005	0.004	0.004
8--NITROGEN DIOXIDE (PPM)	0.007	0.006	0.005	0.004	0.005	0.004	0.003	0.004	0.003	0.002	0.000	.000
9--NITROGEN OXIDES (PPM)	0.011	0.009	0.008	0.007	0.008	0.009	0.011	0.013	0.010	0.006	0.004	0.004
19--FLUOROCARBON-11 (PPT)	240.	246.	193.	172.	176.	165.	172.	197.	210.	214.	208.	204.
20--CARBON TETRACHLORIDE (PPT)	255.	150.	195.	180.	195.	150.	360.	180.	240.	255.	240.	210.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.250	6.625	4.000	5.750	4.625	3.175	1.700	0.425	0.025	.000	.000	.000
2--WIND SPEED (MPH)	6.200	8.800	8.900	9.300	8.800	9.400	7.200	6.600	5.600	3.900	2.900	3.000
3--WIND DIRECTION (DEGREES)	205.	161.	170.	192.	182.	195.	189.	191.	191.	186.	187.	191.
4--TEMPERATURE (CENTIGRADE)	31.	33.	31.	31.	31.	30.	29.	27.	26.	25.	24.	23.
5--RELATIVE HUMIDITY (PERCENT)	50.	47.	50.	50.	52.	55.	60.	67.	72.	77.	83.	87.
6--OZONE (PPM)	0.057	0.063	0.075	-0.093	-0.111	0.130	0.130	0.118	0.082	0.037	0.011	0.004
7--NITRIC OXIDE (PPM)	0.003	0.004	0.004	0.005	0.007	0.007	0.006	0.006	0.004	0.003	0.003	0.002
8--NITROGEN DIOXIDE (PPM)	.000	.000	0.000	.000	0.002	0.005	0.005	0.007	0.008	0.010	0.009	0.008
9--NITROGEN OXIDES (PPM)	0.003	0.004	0.005	0.005	0.009	0.012	0.012	0.012	0.012	0.013	0.012	0.010
19--FLUOROCARBON-11 (PPT)	167.	189.	210.	210.	251.	236.	266.	313.	257.	238.	182.	257.
20--CARBON TETRACHLORIDE (PPT)	210.	300.	195.	150.	225.	210.	180.	255.	240.	330.	150.	150.

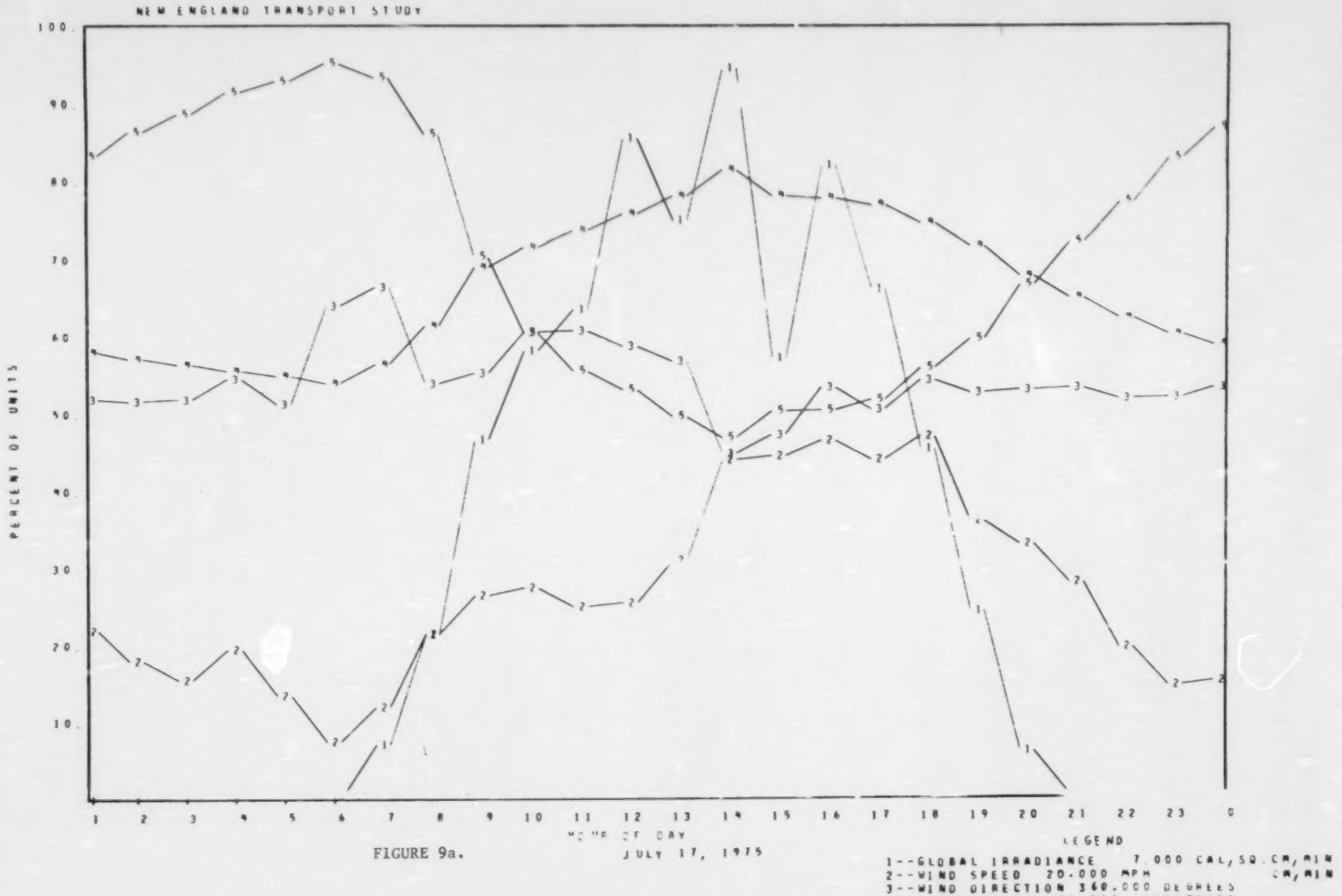
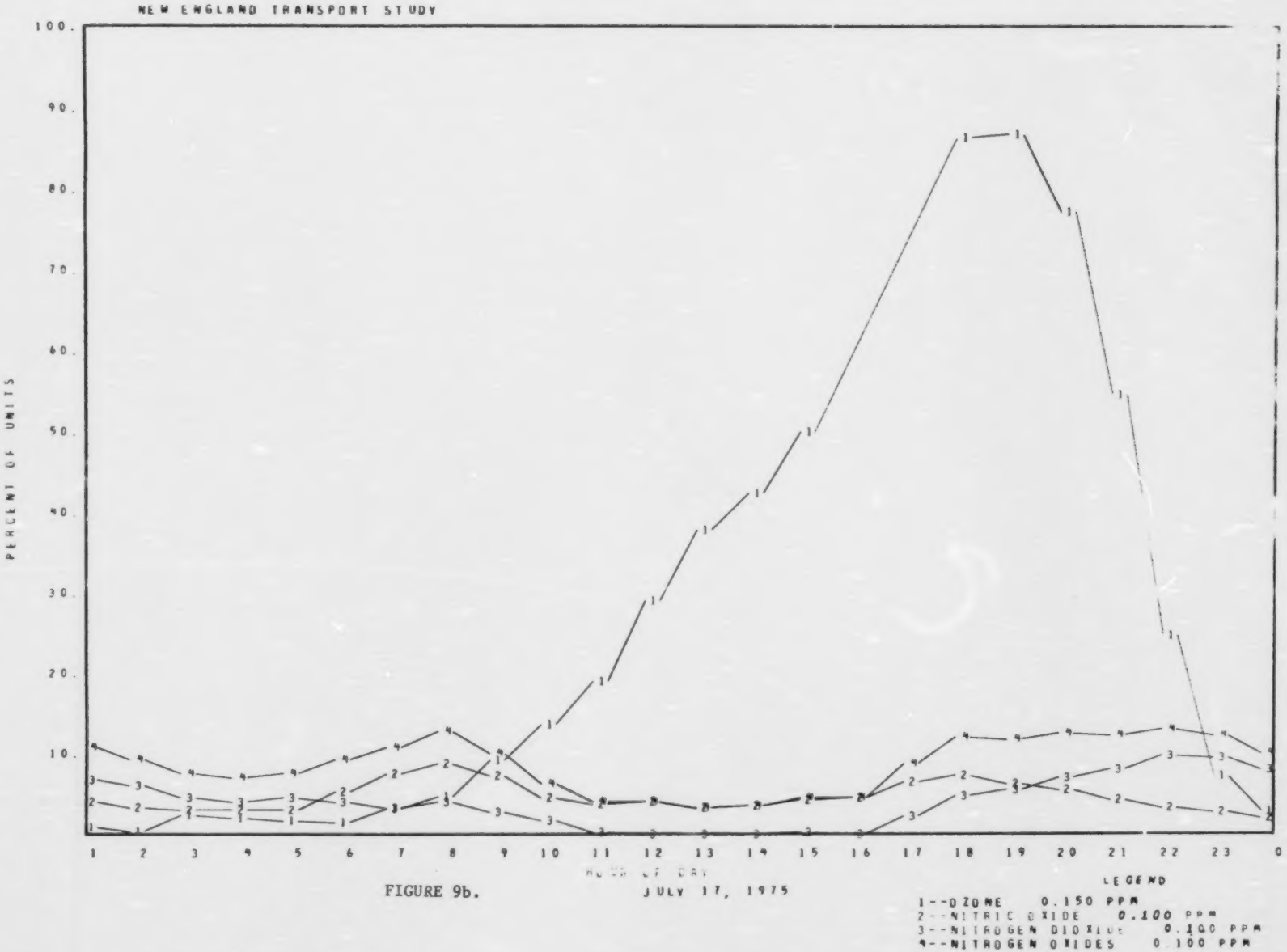

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 17, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH CM/MIN
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 9a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 17, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 9b.

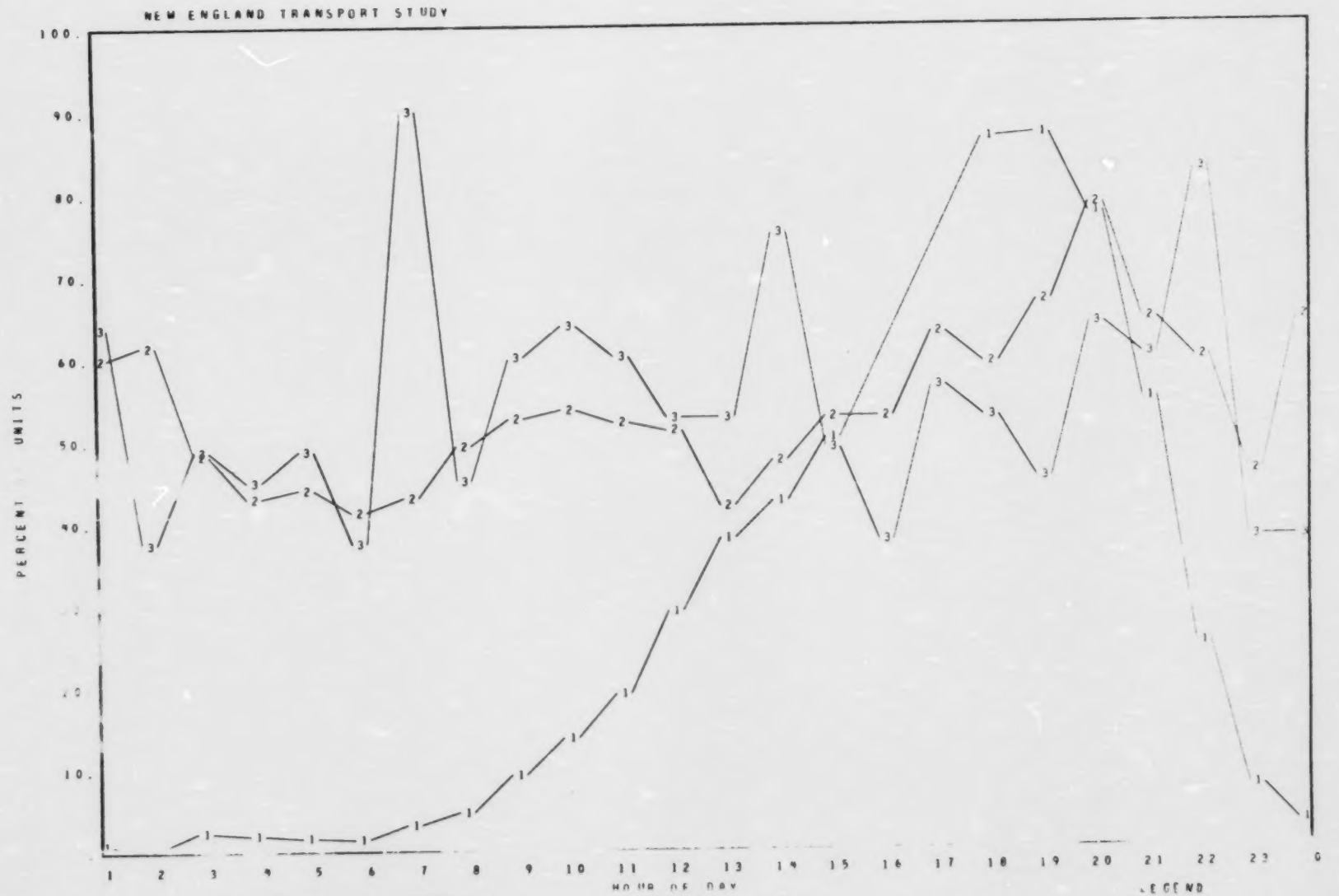
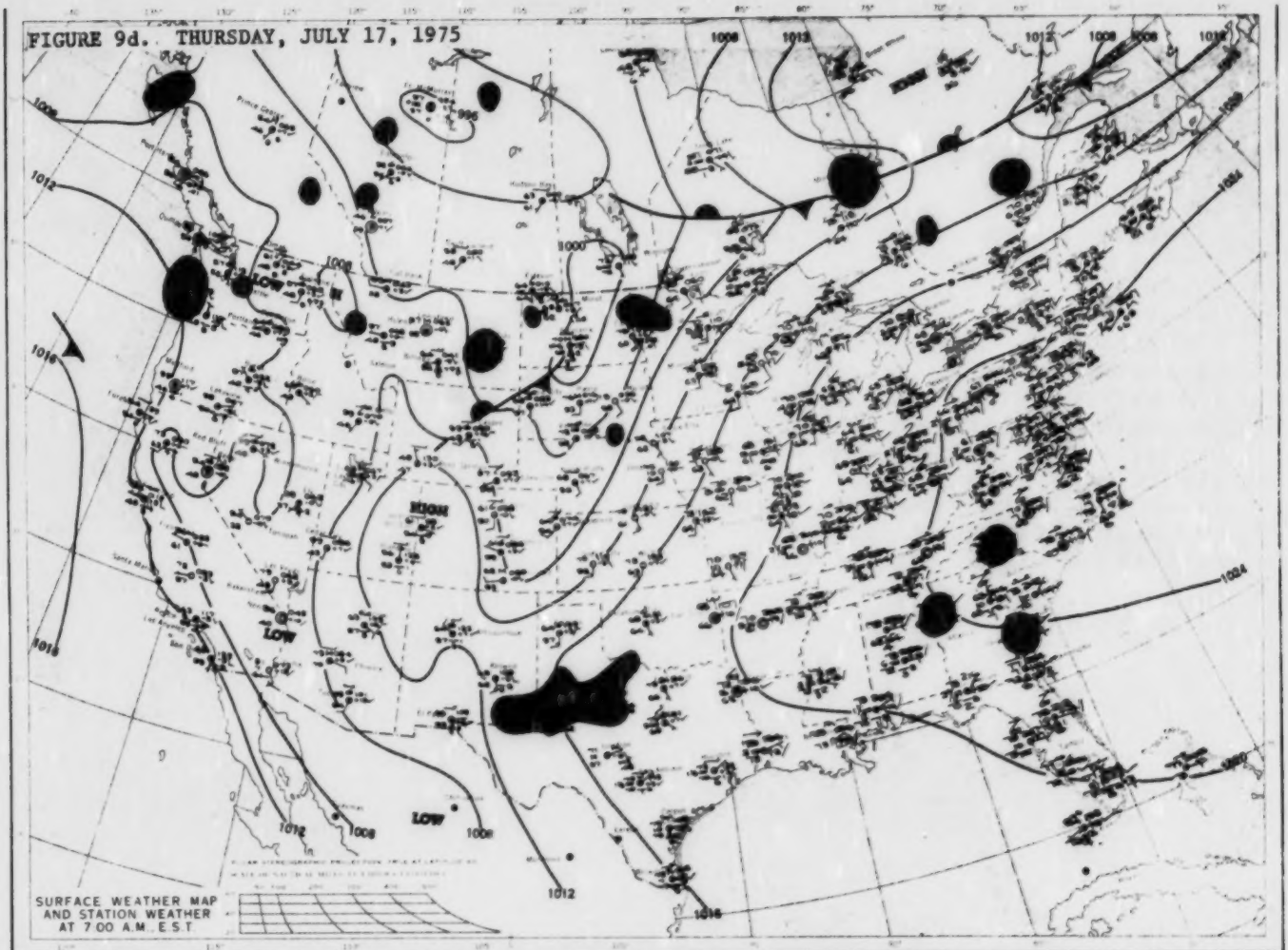
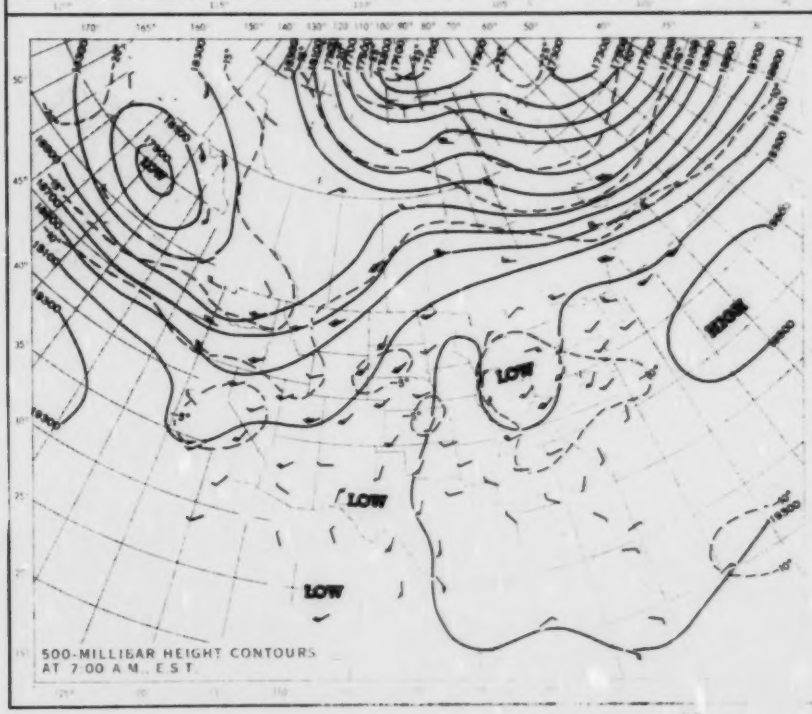

NEW ENGLAND TRANSPORT STUDY
PERCENT UNITS
100.
90.
80.
70.
60.
50.
40.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 17, 1973
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 400.000 PPT
3--CARBON TETRACHLORIDE 400.000 PPT

FIGURE 9c.

FIGURE 9d. THURSDAY, JULY 17, 1975





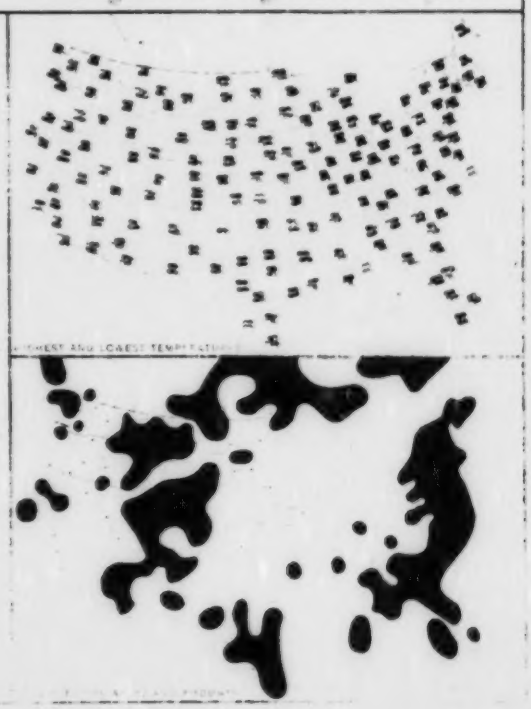


TABLE 6a. JULY 19, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.241	24
2--WIND SPEED (MPH)	4.267	24
3--WIND DIRECTION (DEGREES)	187.459	24
4--TEMPERATURE (CENTIGRADE)	27.902	24
5--RELATIVE HUMIDITY (PERCENT)	68.991	24
6--OZONE (PPM)	0.051	24
7--NITRIC OXIDE (PPM)	0.004	24
8--NITROGEN DIOXIDE (PPM)	0.008	24
9--NITROGEN OXIDES (PPM)	0.012	24
10--METHANE (PPMC)	2.127	12
11--NON-METHANE HYDROCARBON (PPMC)	0.579	12
19--FLUOROCARBON-11 (PPT)	224.	19
20--CARBON TETRACHLORIDE (PPT)	166.	19

TABLE 6b.

SUBSTANCE — HOUR AVERAGES FOR JULY 18, 1975

	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.575	1.800	3.225	4.500	5.175	4.400
2--WIND SPEED (MPH)	2.500	2.100	2.200	2.600	3.000	4.200	3.500	3.800	4.000	2.800	4.600	5.400
3--WIND DIRECTION (DEGREES)	177.	182.	145.	189.	194.	190.	190.	189.	211.	204.	98.	139.
4--TEMPERATURE (CENTIGRADE)	23.	23.	22.	22.	22.	22.	23.	25.	28.	30.	31.	32.
5--RELATIVE HUMIDITY (PERCENT)	90.	93.	95.	93.	100.	100.	87.	87.	72.	57.	53.	53.
6--OZONE (PPM)	0.005	0.001	.000	.000	.000	.000	.000	0.008	0.042	0.068	0.075	0.080
7--NITRIC OXIDE (PPM)	0.001	0.002	0.002	0.001	0.001	0.002	0.003	0.004	0.005	0.007	0.006	0.007
8--NITROGEN DIOXIDE (PPM)	0.008	0.009	0.008	0.008	0.008	0.010	0.007	0.007	0.007	0.008	0.008	0.008
9--NITROGEN OXIDES (PPM)	0.010	0.011	0.010	0.009	0.009	0.011	0.010	0.011	0.012	0.014	0.010	0.010
10--METHANE (PPMC)	1.890	1.930	1.780	2.960	2.640	2.120	2.140	2.200	1.960	2.000	1.950	-1.95
11--NON-METHANE HYDROCARBON (PPMC)	0.596	0.601	0.596	0.601	0.599	0.604	0.600	0.603	0.596	0.596	0.598	-0.57
19--FLUOROCARBON-11 (PPT)	210.	216.	186.	199.	300.	210.	81.	86.	-143.	-200.	257.	232.
20--CARBON TETRACHLORIDE (PPT)	225.	180.	210.	225.	300.	150.	60.	.	-58.	-110.	165.	150.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.925	6.425	6.400	5.575	4.500	3.100	1.550	0.425	0.175	.000	.000	.000
2--WIND SPEED (MPH)	7.400	6.600	6.300	5.700	7.400	5.000	4.900	4.100	3.50	[illegible]	[illegible]	
3--WIND DIRECTION (DEGREES)	148.	186.	214.	218.	212.	222.	210.	198.	197.			
4--TEMPERATURE (CENTIGRADE)	34.	34.	34.	34.	33.	33.	31.	29.	27.	[illegible]	[illegible]	
5--RELATIVE HUMIDITY (PERCENT)	46.	45.	43.	42.	41.	42.	46.	55.	67.	75.	77.	[illegible]
6--OZONE (PPM)	0.087	0.074	0.069	0.078	0.080	0.076	0.074	0.099	0.132	0.093	0.051	[illegible]
7--NITRIC OXIDE (PPM)	0.007	0.005	0.002	0.002	0.002	0.002	.000	0.025	0.008	0.006	0.004	[illegible]
8--NITROGEN DIOXIDE (PPM)	0.003	0.003	0.004	0.005	0.006	0.005	0.005	0.007	0.014	0.016	0.015	[illegible]
9--NITROGEN OXIDES (PPM)	0.010	0.008	0.006	0.007	0.007	0.006	0.005	0.031	0.023	0.022	0.019	0.019
10--METHANE (PPMC)	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950	-1.950
11--NON-METHANE HYDROCARBON (PPMC)	-0.560	-0.541	-0.522	-0.502	-0.483	-0.464	-0.445	-0.426	-0.407	-0.388	-0.369	0.350
19--FLUOROCARBON-11 (PPT)	-213.	-194.	-175.	156.	139.	150.	165.	242.	412.	347.	354.	311.
20--CARBON TETRACHLORIDE (PPT)	-142.	-135.	-127.	120.	120.	75.	120.	150.	180.	195.	300.	225.

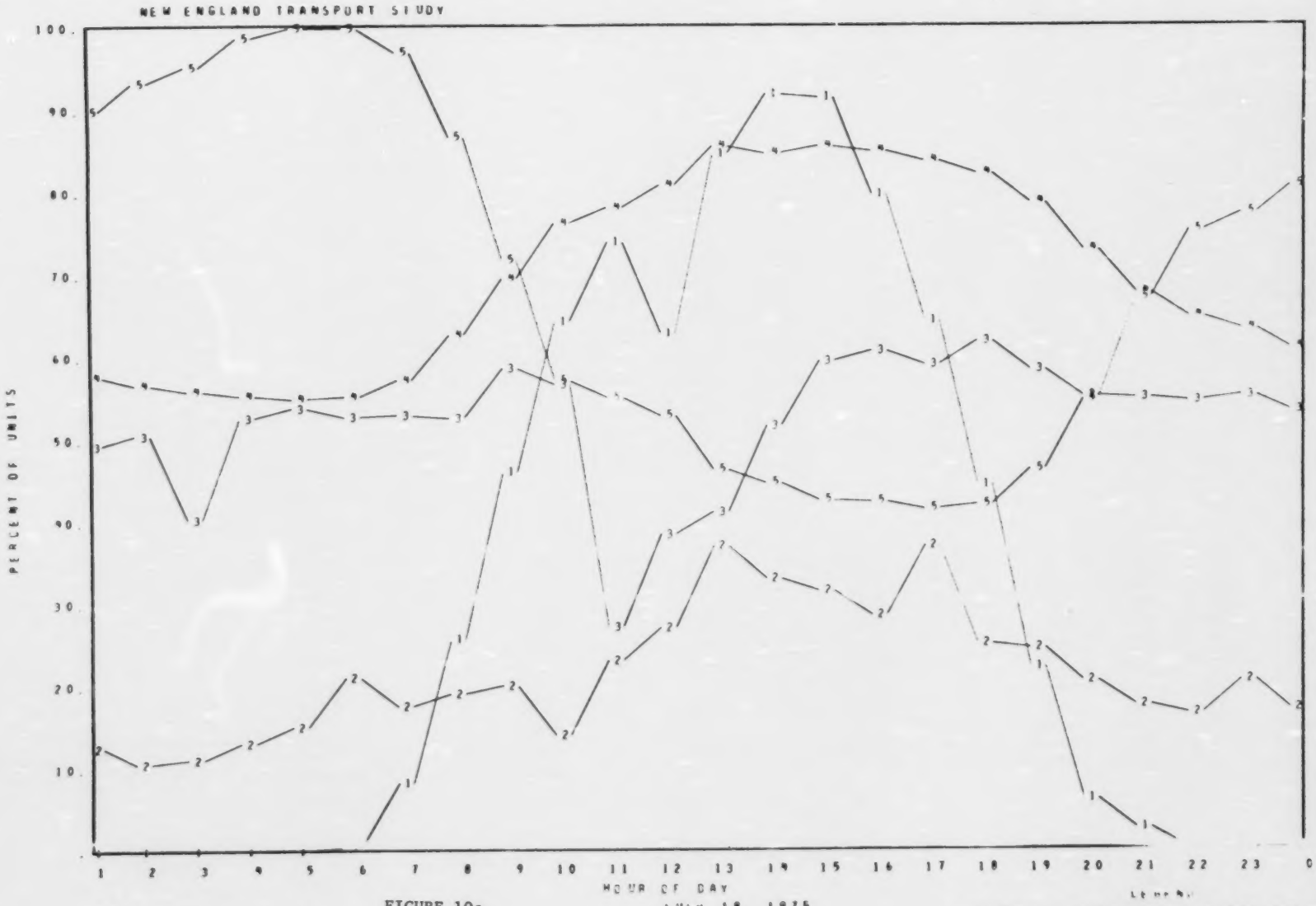

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 18, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 10a.

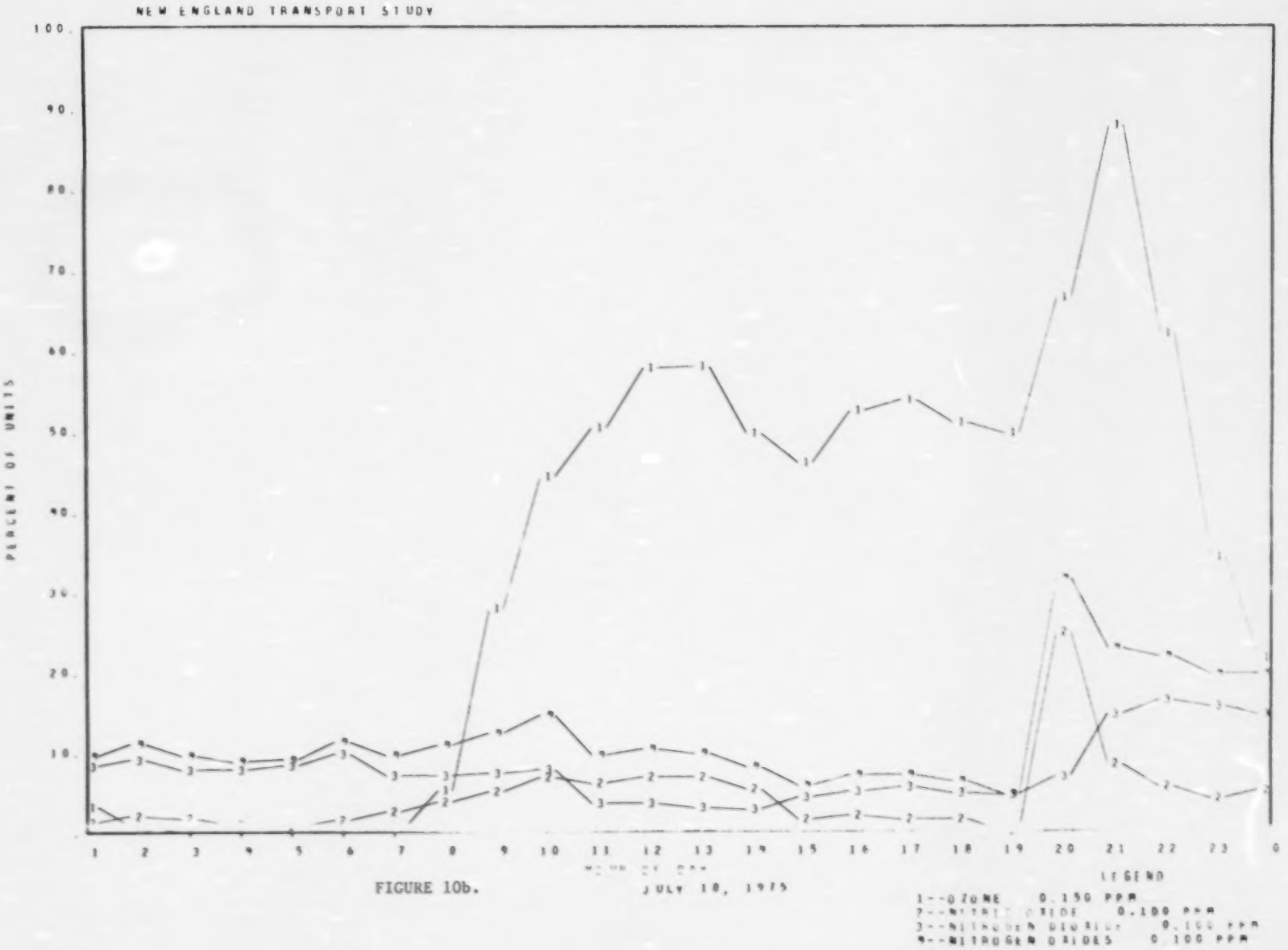

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
JULY 18, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 10b.

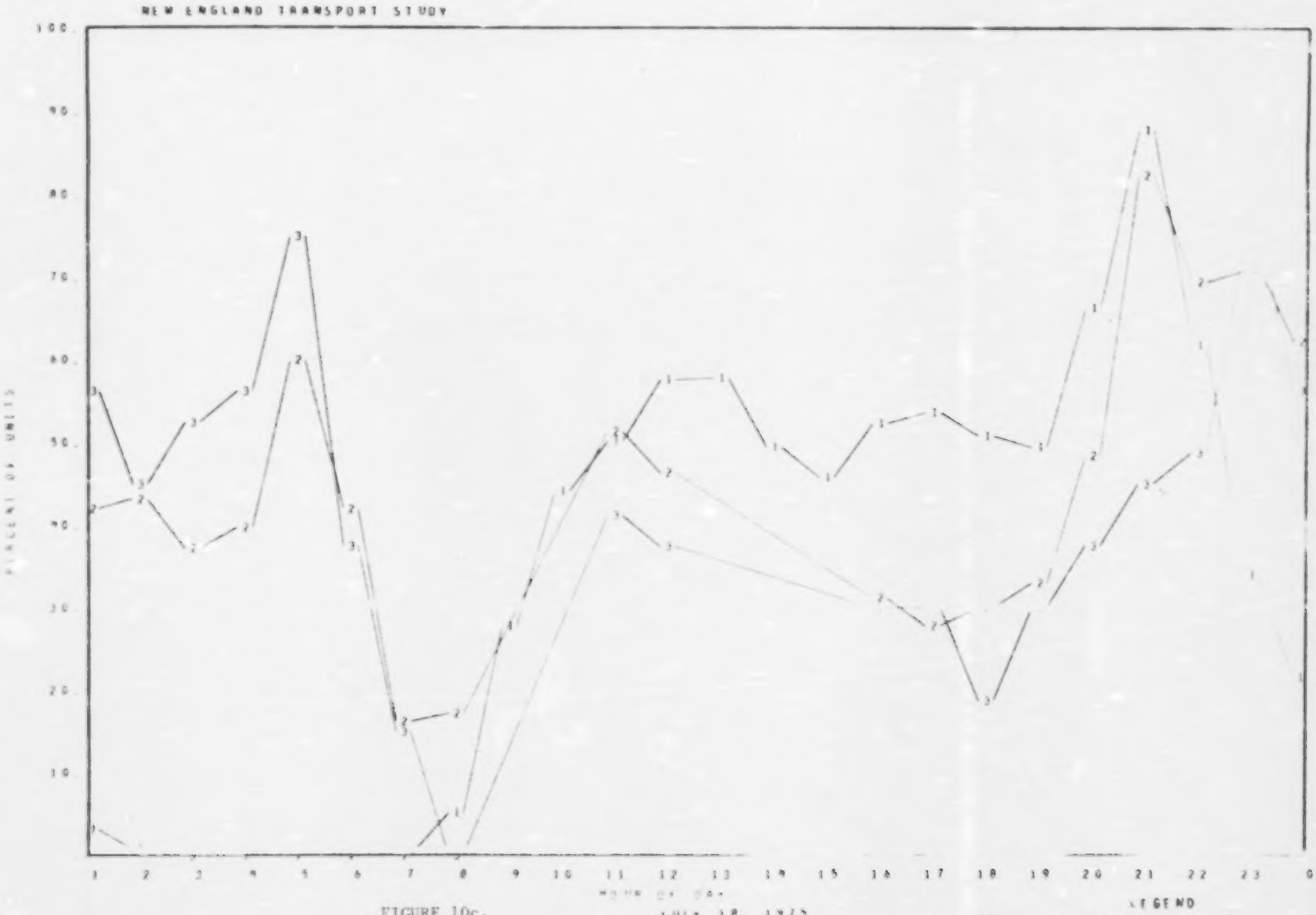
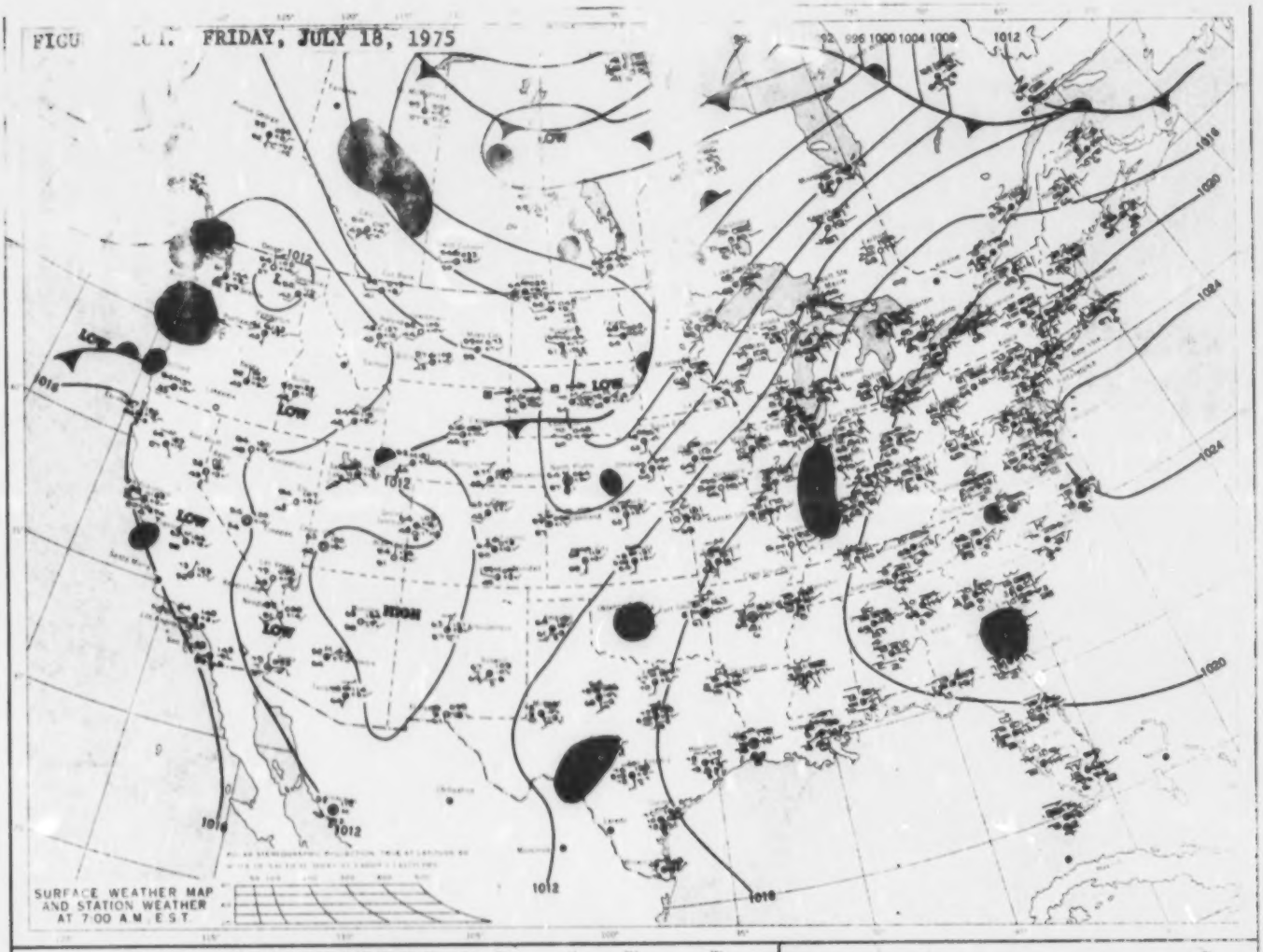
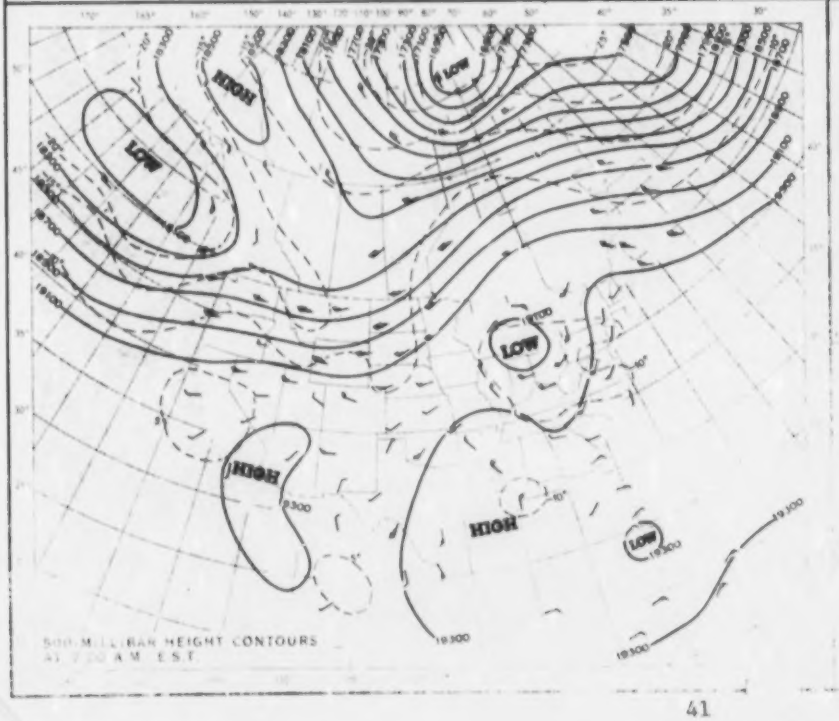

NEW ENGLAND TRANSPORT STUDY
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
JULY 10, 1975
LEGEND
1--OZONE 0.150 PPM
2--TRICHLOROFLUOROCARBON-11 500.000 PPT
3--CARBON TETRACHLORIDE 100.000 PPT

FIGURE 10c.

FIGU .1. FRIDAY, JULY 18, 1975



SURFACE WEATHER MAP
AND STATION WEATHER
AT 7:00 A.M. E.S.T.



500 MILLIBAR HEIGHT CONTOURS
AT 7:00 A.M. E.S.T.

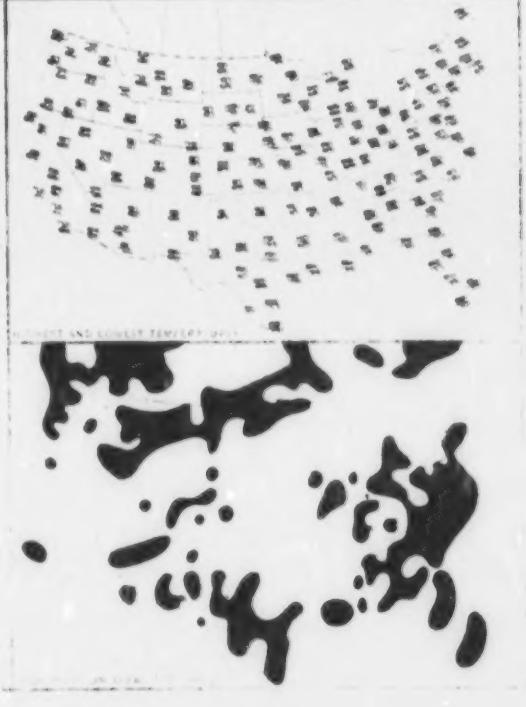


TABLE 7a. JULY 19, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.976	24
2--WIND SPEED (MPH)	6.062	24
3--WIND DIRECTION (DEGREES)	195.937	24
4--TEMPERATURE (CENTIGRADE)	26.917	24
5--RELATIVE HUMIDITY (PERCENT)	69.175	24
6--OZONE (PPM)	0.053	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.010	24
9--NITROGEN OXIDES (PPM)	0.012	24
10--METHANE (PPMC)	2.094	24
12--CARBON MONOXIDE (PPM)	0.315	24
19--FLUOROCARBON-11 (PPT)	228.	24
20--CARBON TETRACHLORIDE (PPT)	245.	22

SUBSTANCE

TABLE 7b. HOUR AVERAGES FOR JULY 19, 1975

	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.750	1.050	3.025	3.050	5.075	4.975
2--WIND SPEED (MPH)	3.100	2.800	2.800	2.400	2.600	3.100	4.100	4.600	5.800	8.000	8.000	7.500
3--WIND DIRECTION (DEGREES)	188.	182.	177.	167.	188.	187.	198.	184.	193.	201.	209.	212.
4--TEMPERATURE (CENTIGRADE)	24.	23.	22.	22.	22.	22.	23.	24.	27.	28.	29.	30.
5--RELATIVE HUMIDITY (PERCENT)	84.	86.	90.	93.	94.	93.	90.	88.	75.	67.	61.	56.
6--OZONE (PPM)	0.026	0.021	0.015	0.011	0.009	0.006	0.009	0.010	0.025	0.043	0.053	0.073
7--NITRIC OXIDE (PPM)	0.005	0.005	0.005	0.004	0.003	0.004	0.007	0.006	0.003	0.001	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.014	0.015	0.015	0.015	0.014	0.019	0.017	0.015	0.011	0.007	0.007	0.007
9--NITROGEN OXIDES (PPM)	0.019	0.020	0.020	0.019	0.018	0.023	0.024	0.021	0.014	0.008	0.008	0.009
10--METHANE (PPMC)	2.500	2.350	2.350	2.100	2.750	2.450	2.400	2.250	2.150	2.050	2.000	2.000
12--CARBON MONOXIDE (PPM)	0.487	0.537	0.612	0.725	0.800	0.887	0.787	0.662	0.275	0.062	0.037	0.050
19--FLUOROCARBON-11 (PPT)	279.	279.	253.	244.	289.	283.	285.	268.	246.	203.	208.	203.
20--CARBON TETRACHLORIDE (PPT)	300.	300.	150.	405.	300.	315.	225.	255.	150.	105.	180.	240.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.500	6.000	6.350	5.450	3.100	2.100	0.725	0.225	0.025	.000	.000	.000
2--WIND SPEED (MPH)	7.800	9.600	10.400	9.900	9.300	8.000	5.500	6.000	5.900	5.900	5.600	6.800
3--WIND DIRECTION (DEGREES)	217.	212.	217.	215.	211.	204.	193.	190.	187.	193.	189.	188.
4--TEMPERATURE (CENTIGRADE)	31.	32.	33.	33.	32.	31.	29.	28.	27.	26.	26.	25.
5--RELATIVE HUMIDITY (PERCENT)	53.	49.	45.	44.	45.	49.	56.	63.	66.	69.	71.	74.
6--OZONE (PPM)	0.077	0.085	0.090	0.096	0.099	0.097	0.113	0.110	0.086	0.060	0.037	0.024
7--NITRIC OXIDE (PPM)	0.001	.000	0.000	.000	0.000	.000	.000	.000	.000	.000	.000	.000
8--NITROGEN DIOXIDE (PPM)	0.004	0.003	0.003	0.003	0.003	0.003	0.004	0.009	0.010	0.012	0.010	0.012
9--NITROGEN OXIDES (PPM)	0.005	0.003	0.003	0.003	0.004	0.003	0.004	0.009	0.010	0.012	0.010	0.012
10--METHANE (PPMC)	1.950	1.950	1.800	1.850	1.850	1.900	1.950	1.950	1.900	1.950	1.900	1.950
12--CARBON MONOXIDE (PPM)	0.025	0.025	0.100	0.087	0.025	0.013	0.138	0.138	0.225	0.250	0.300	0.300
19--FLUOROCARBON-11 (PPT)	176.	182.	184.	193.	180.	193.	225.	208.	210.	231.	231.	227.
20--CARBON TETRACHLORIDE (PPT)	225.	150.	165.	195.	-255.	-315.	375.	225.	405.	255.	285.	180.

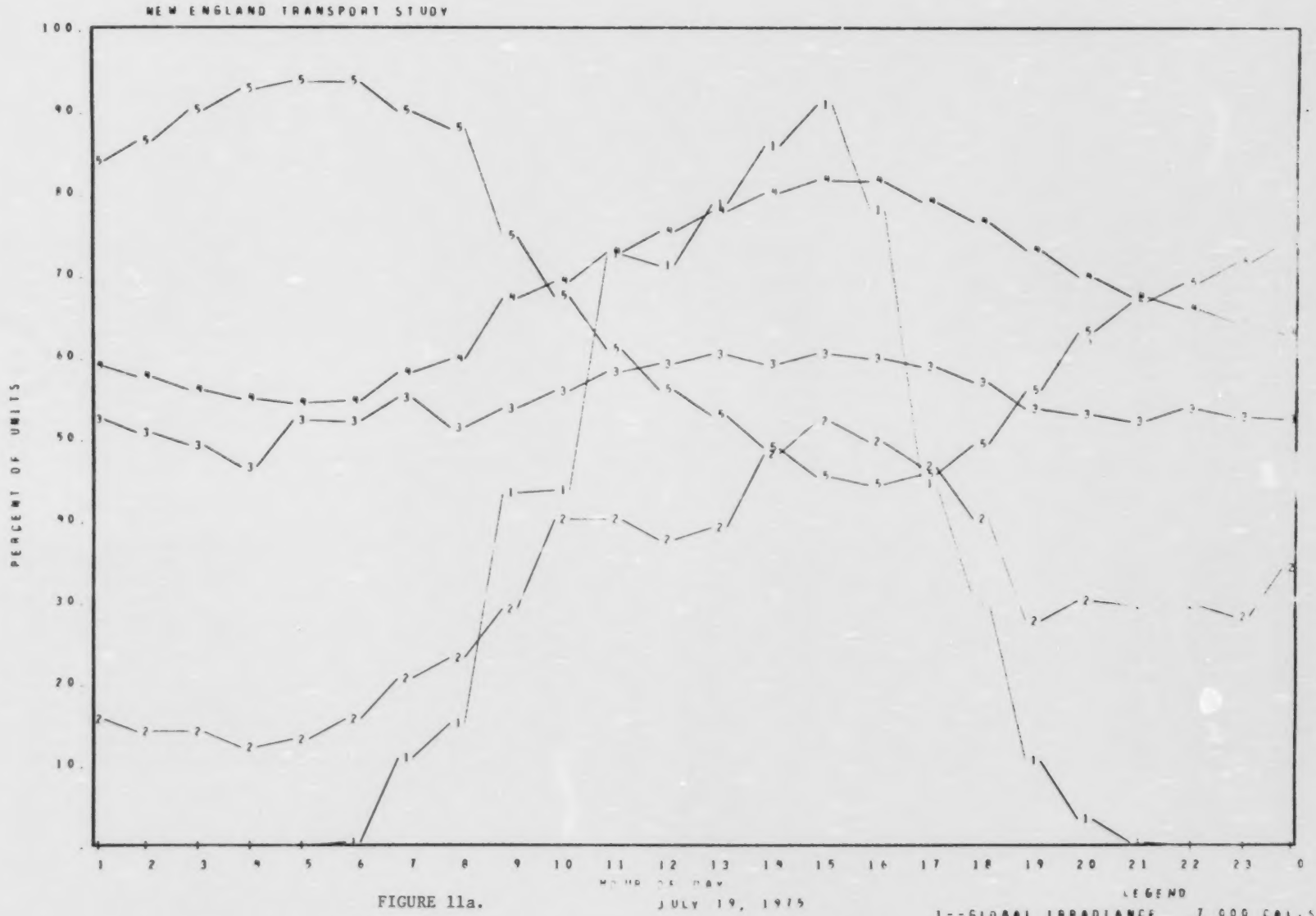

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 19, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 11a.

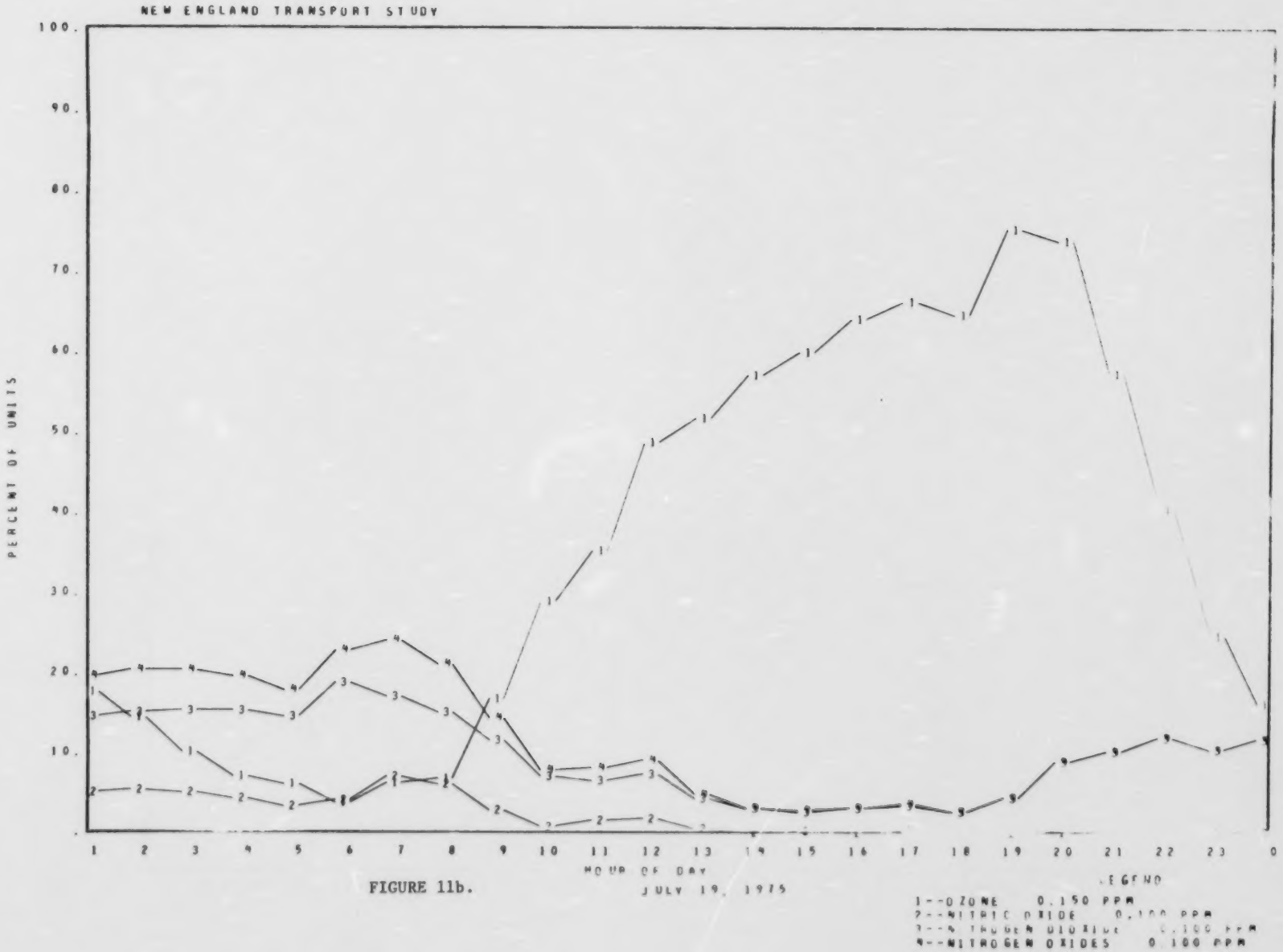
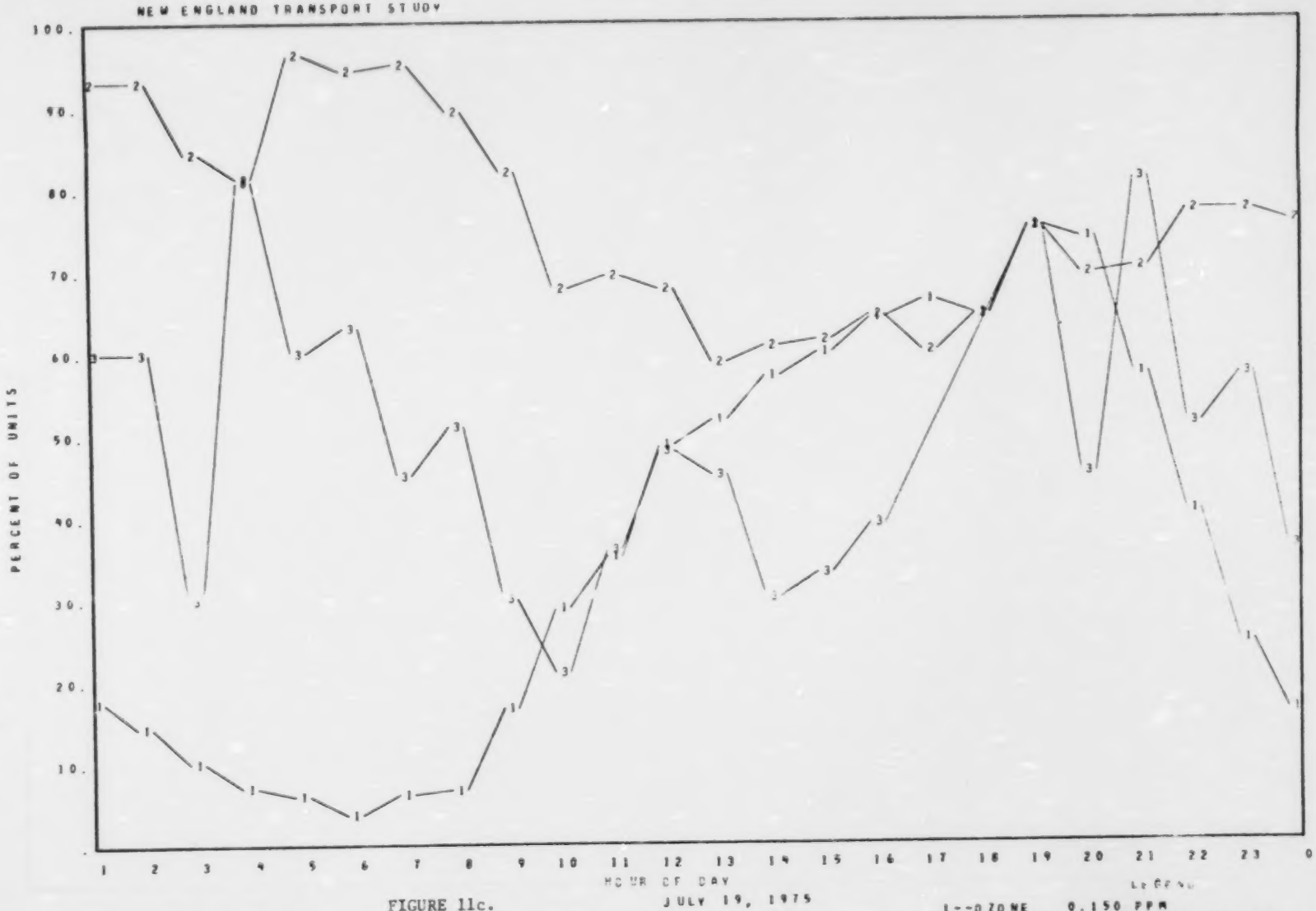

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 19, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 11b.


NEW ENGLAND TRANSPORT STUDY
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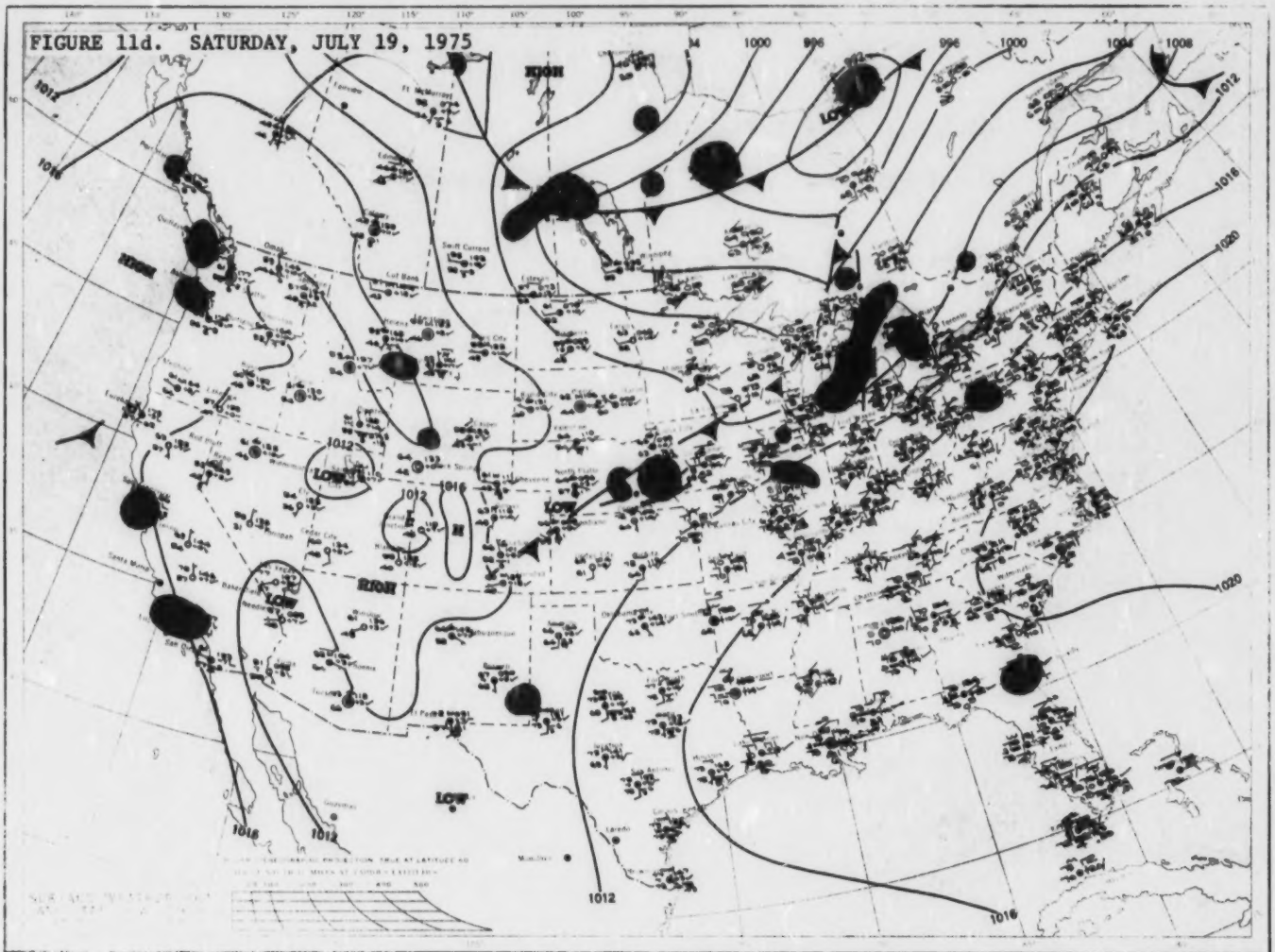
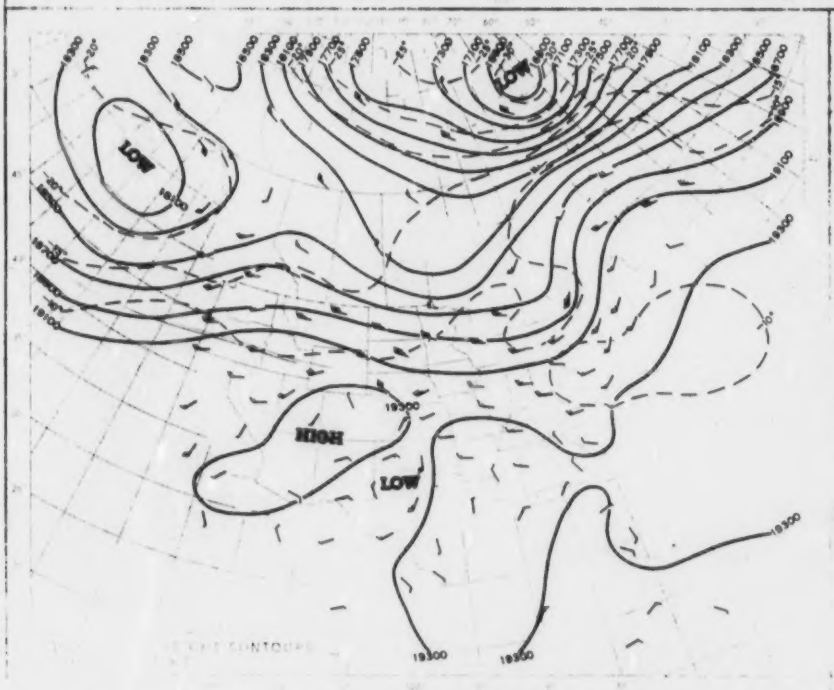
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 19, 1975
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 500.000 PPT

FIGURE 11c.

FIGURE 11d. SATURDAY, JULY 19, 1975





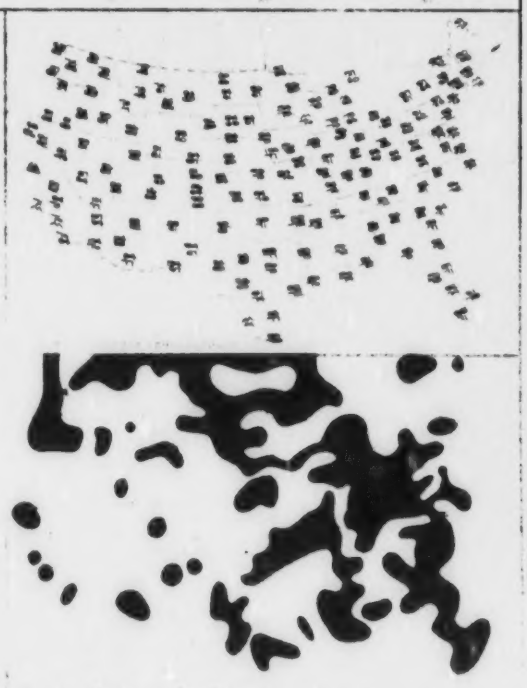


TABLE 8a. JULY 20. 1975

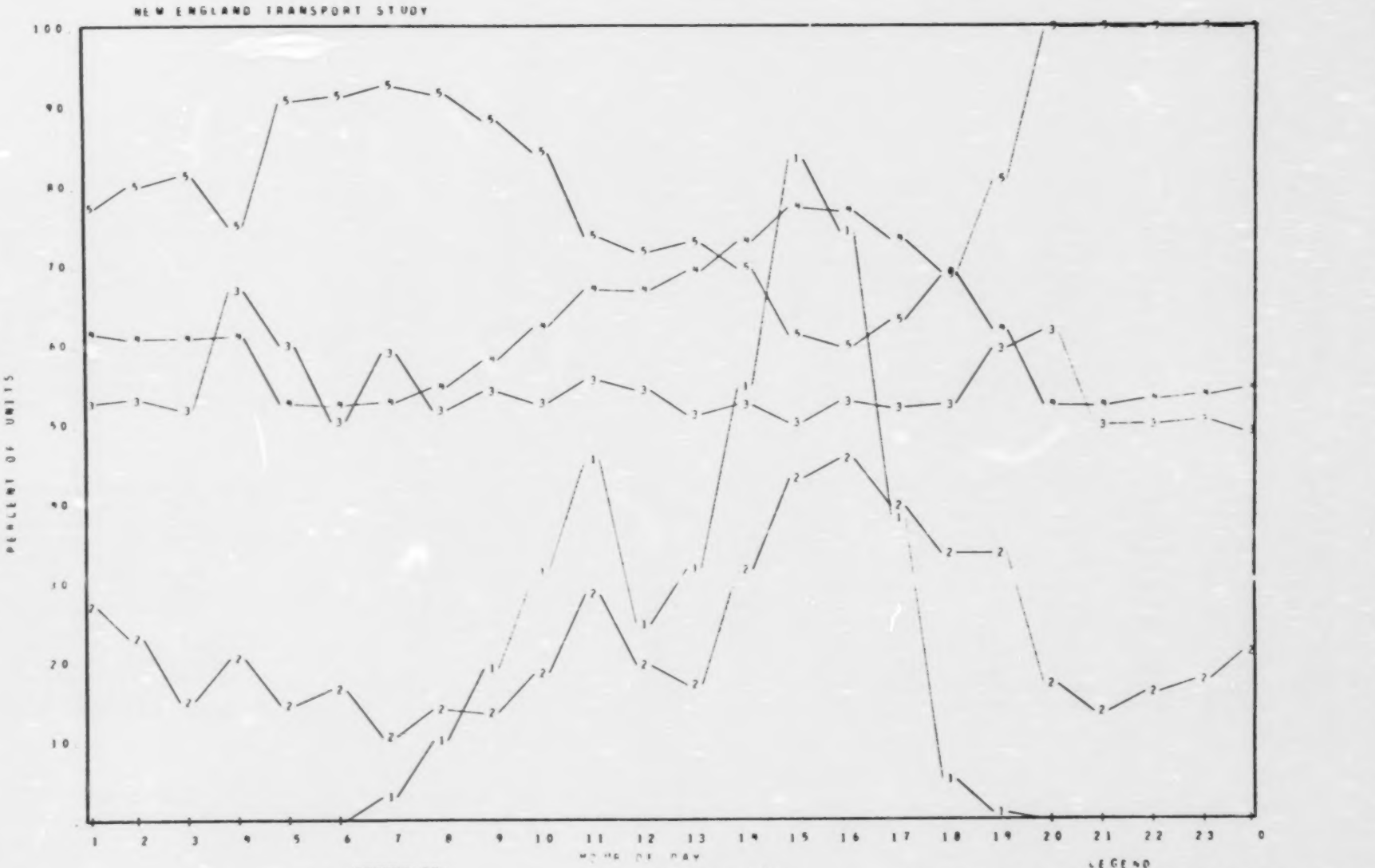
SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.052	24
2--WIND SPEED (MPH)	4.579	24
3--WIND DIRECTION (DEGREES)	193.706	24
4--TEMPERATURE (CENTIGRADE)	24.568	24
5--RELATIVE HUMIDITY (PERCENT)	82.099	24
6--OZONE (PPM)	0.051	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	2.121	24
11--NON-METHANE HYDROCARBON (PPMC)	0.246	20
12--CARBON MONOXIDE (PPM)	0.092	18
19--FLUOROCARBON-11 (PPT)	194.	24
20--CARBON TETRACHLORIDE (PPT)	280.	24

TABLE 8b.

HOUR AVERAGES FOR JULY 20, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.175	0.600	1.150	1.875	2.725	1.475
2--WIND SPEED (MPH)	5.400	4.600	3.000	4.100	2.900	3.300	2.100	2.800	2.700	3.700	5.700	3.900
3--WIND DIRECTION (DEGREES)	189.	191.	187.	241.	216.	181.	212.	186.	195.	189.	200.	195.
4--TEMPERATURE (CENTIGRADE)	25.	24.	24.	24.	21.	21.	21.	22.	23.	25.	27.	27.
5--RELATIVE HUMIDITY (PERCENT)	77.	80.	81.	75.	91.	91.	93.	92.	88.	84.	73.	72.
6--OZONE (PPM)	0.014	0.010	0.008	0.032	0.052	0.041	0.032	0.027	0.028	0.028	0.040	0.040
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	.000	.000	0.001	0.004	0.002	0.001
8--NITROGEN DIOXIDE (PPM)	0.012	0.012	0.012	0.006	.000	.000	.000	.000	0.002	0.003	0.000	0.001
9--NITROGEN OXIDES (PPM)	0.012	0.012	0.012	0.006	.000	.000	.000	.000	0.003	0.007	0.002	0.002
10--METHANE (PPMC)	2.000	2.100	2.200	1.850	1.900	2.250	2.350	2.250	2.250	2.250	2.050	2.100
11--NON-METHANE HYDROCARBON (PPMC)	0.077	0.160	0.137	0.015	-0.072	-0.128	0.185	-0.218	0.250	0.278	0.250	0.381
12--CARBON MONOXIDE (PPM)	0.367	0.350	0.350	-0.312	-0.274	-0.236	-0.198	-0.160	-0.121	0.083	0.062	0.050
19--FLUOROCARBON-11 (PPT)	242.	253.	178.	182.	152.	180.	165.	167.	195.	189.	180.	242.
20--CARBON TETRACHLORIDE (PPT)	255.	330.	180.	240.	225.	315.	285.	300.	630.	225.	120.	390.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.900	3.275	5.000	4.450	2.275	0.300	0.050	.000	.000	[illegible]	[illegible]	[illegible]
2--WIND SPEED (MPH)	3.400	6.300	8.600	9.100	7.900	6.700	6.700	3.400	2.700	.200	3.500	4.200
3--WIND DIRECTION (DEGREES)	184.	188.	180.	190.	187.	188.	214.	222.	179.	179.	181.	176.
4--TEMPERATURE (CENTIGRADE)	28.	29.	31.	31.	29.	28.	25.	21.	21.	21.	21.	22.
5--RELATIVE HUMIDITY (PERCENT)	73.	69.	61.	60.	63.	69.	81.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.048	0.076	0.111	0.118	0.116	0.105	0.078	0.065	0.059	0.042	0.028	0.026
7--NITRIC OXIDE (PPM)	0.002	0.004	0.004	0.004	0.004	0.003	0.002	0.000	.000	.000	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.002	0.004	0.004	0.003	0.002	0.002	0.002	0.001	0.001	0.002	0.003	0.004
9--NITROGEN OXIDES (PPM)	0.004	0.008	0.008	0.007	0.006	0.005	0.004	0.001	0.001	0.002	0.004	0.005
10--METHANE (PPMC)	2.100	2.100	1.950	1.900	1.950	1.900	1.900	2.050	2.350	2.450	2.350	2.350
11--NON-METHANE HYDROCARBON (PPMC)	0.408	0.468	0.476	0.498	0.476	0.399	0.264	0.133	0.023	0.039	0.003	-0.016
12--CARBON MONOXIDE (PPM)	0.037	0.075	0.050	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
19--FLUOROCARBON-11 (PPT)	236.	330.	262.	206.	195.	154.	150.	150.	150.	144.	165.	176.
20--CARBON TETRACHLORIDE (PPT)	240.	495.	870.	165.	150.	120.	165.	180.	360.	180.	150.	150.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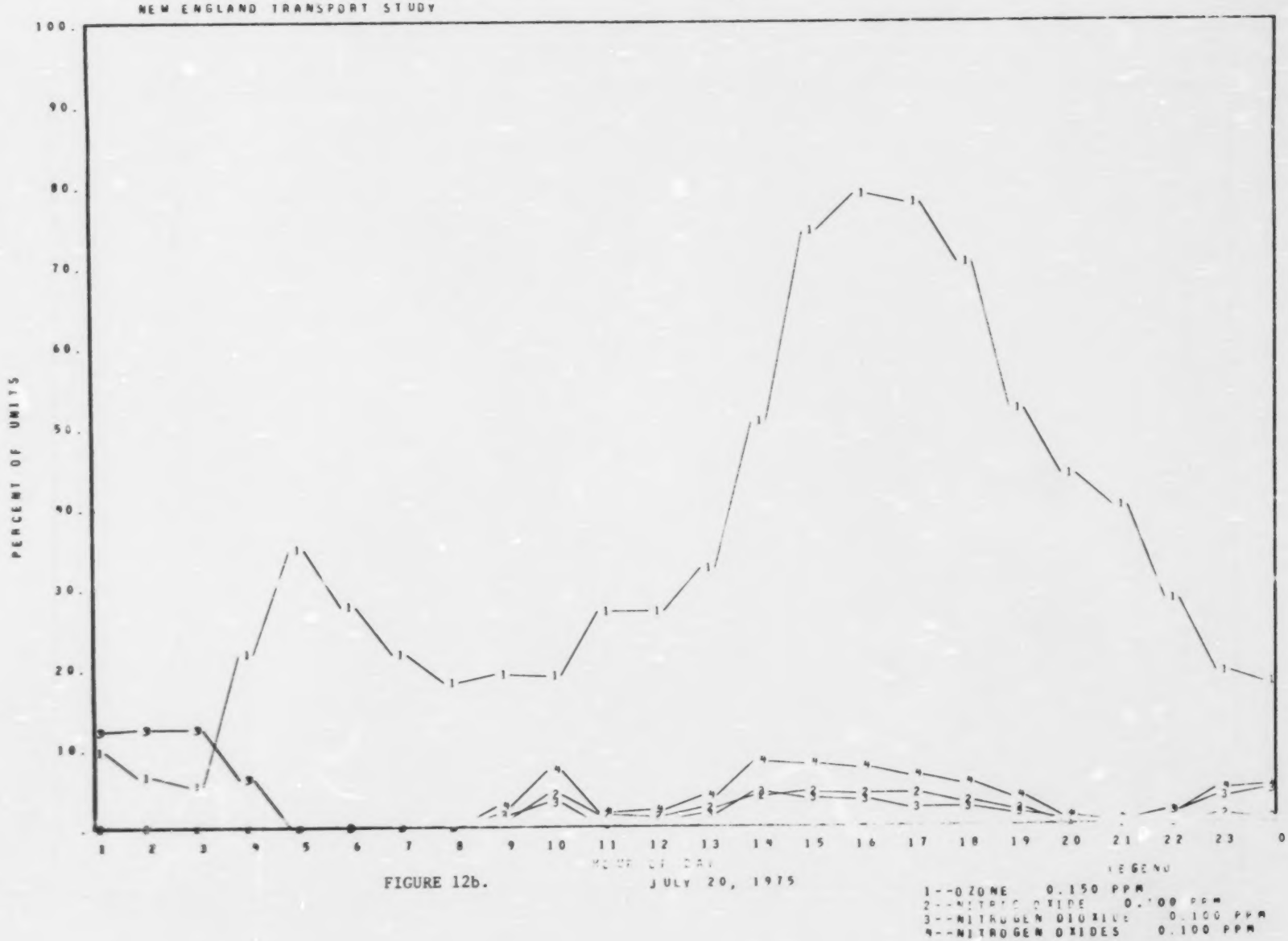
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 20, 1975
LEGEND
1--GLOBAL IRRADIANCE 6.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 12a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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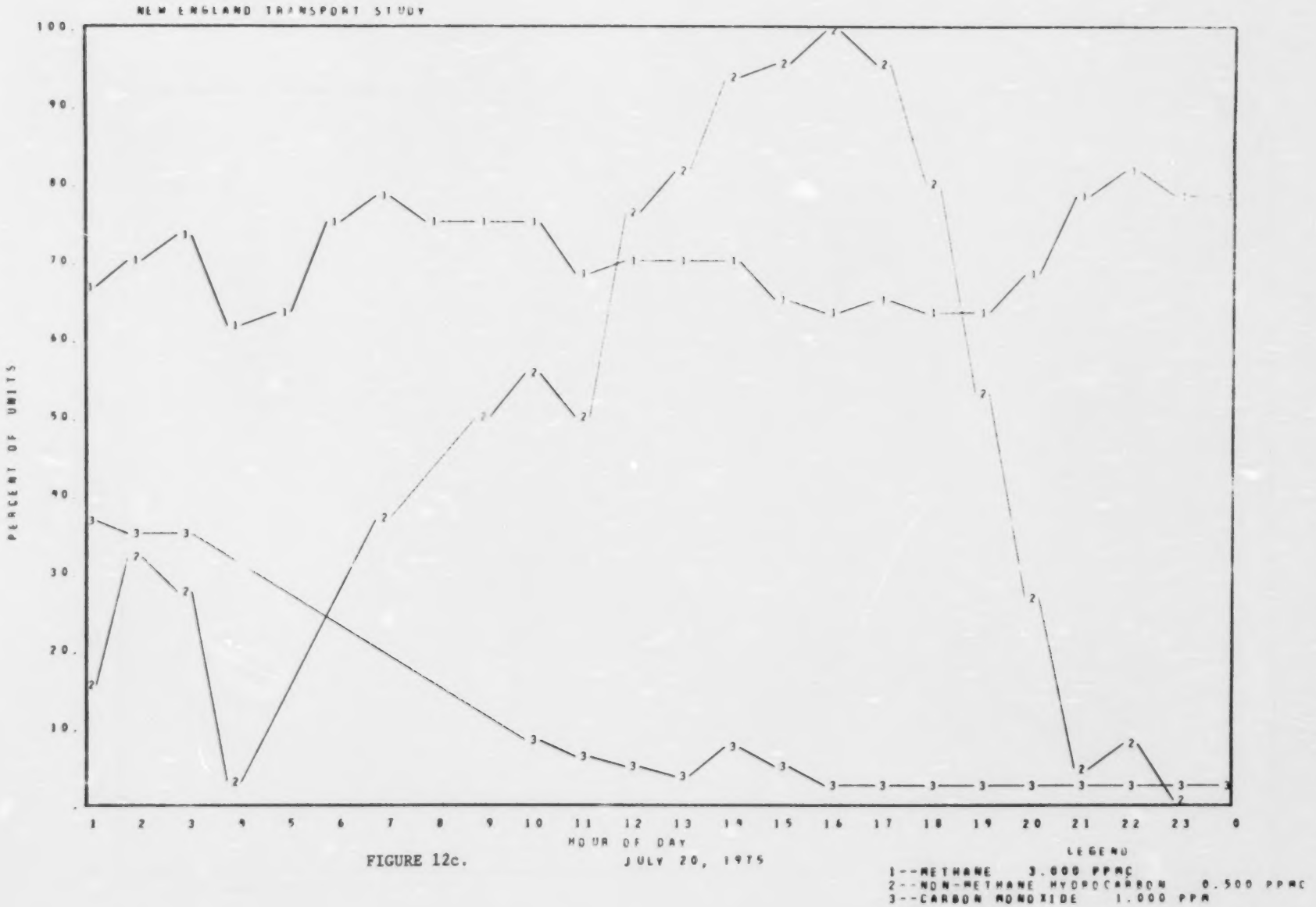
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 20, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 12b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 20, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.500 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 12c.

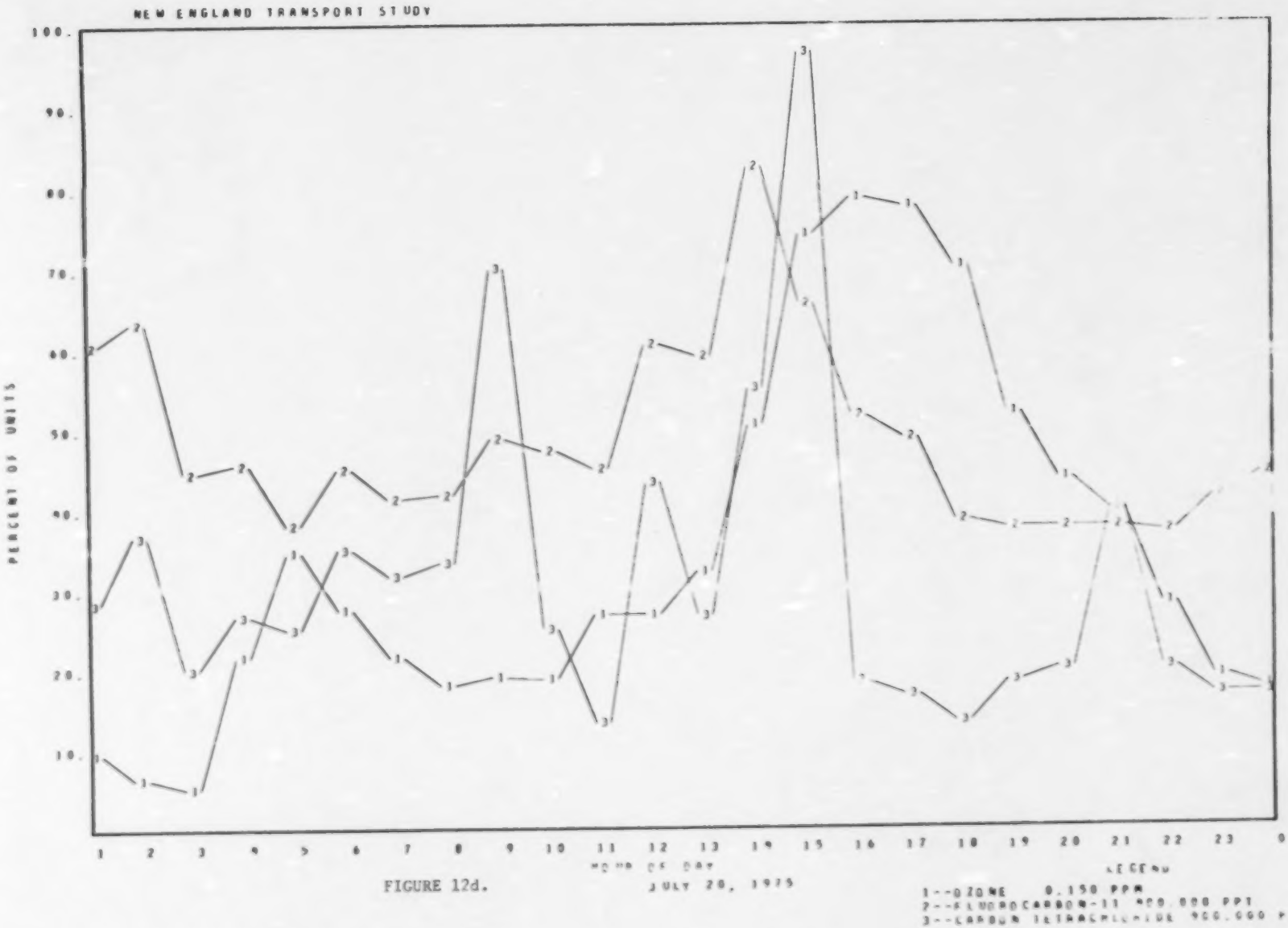
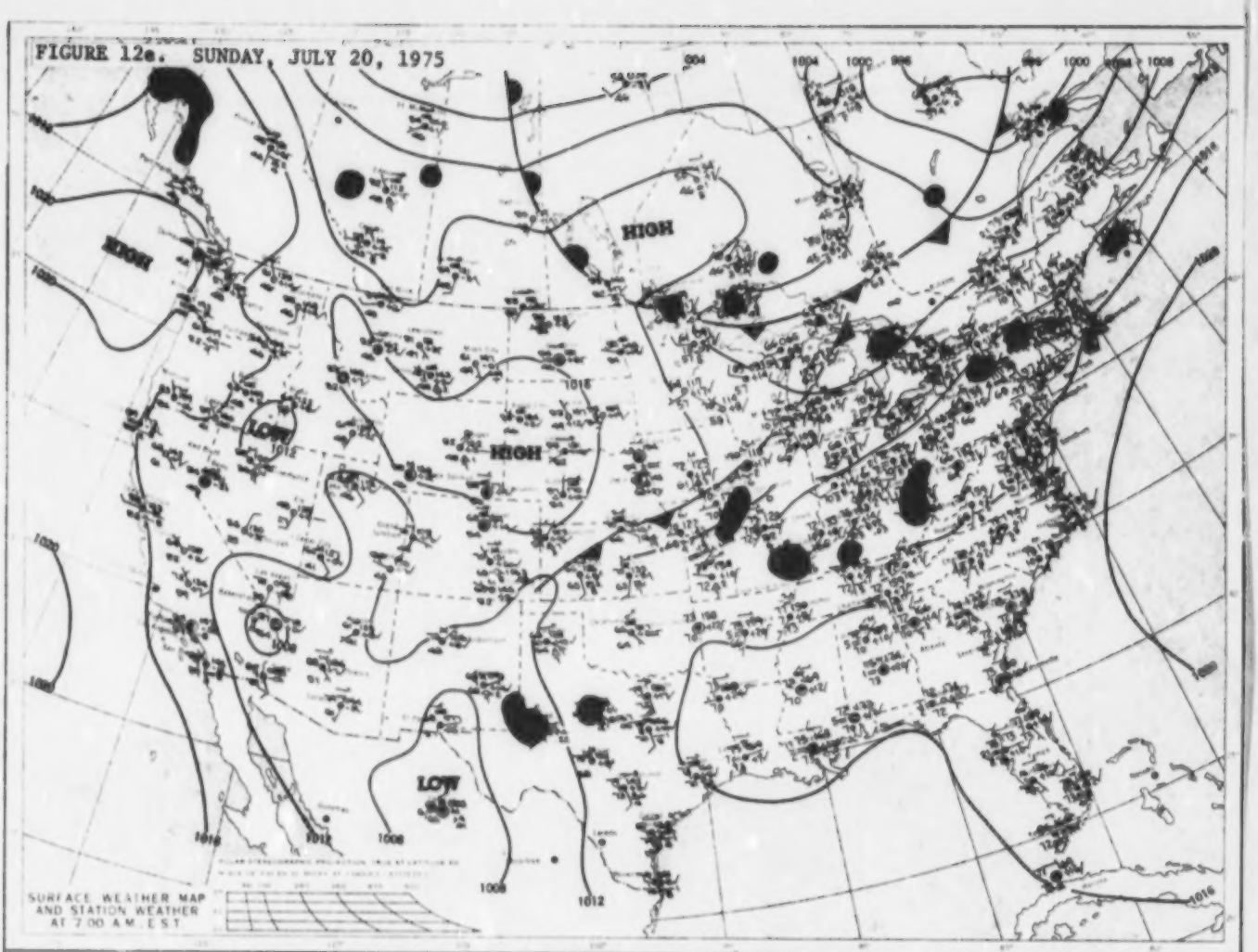
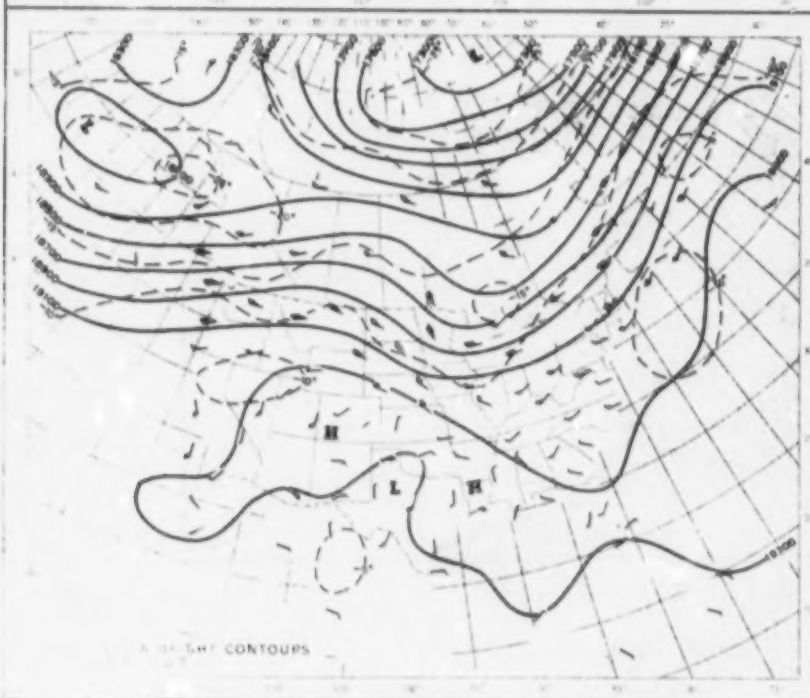

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 28, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200,000 PPT
3--CARBON TETRACHLORIDE 900,000 PPT

FIGURE 12d.

FIGURE 12e. SUNDAY, JULY 20, 1975





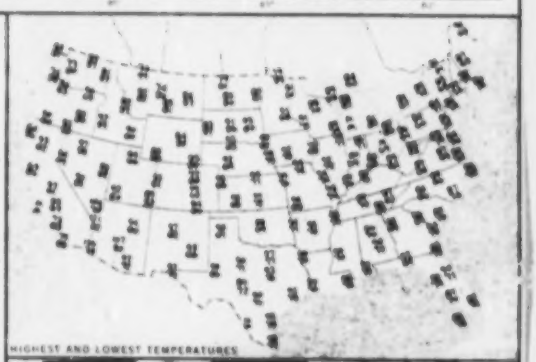


TABLE 9a. JULY 21. 1975

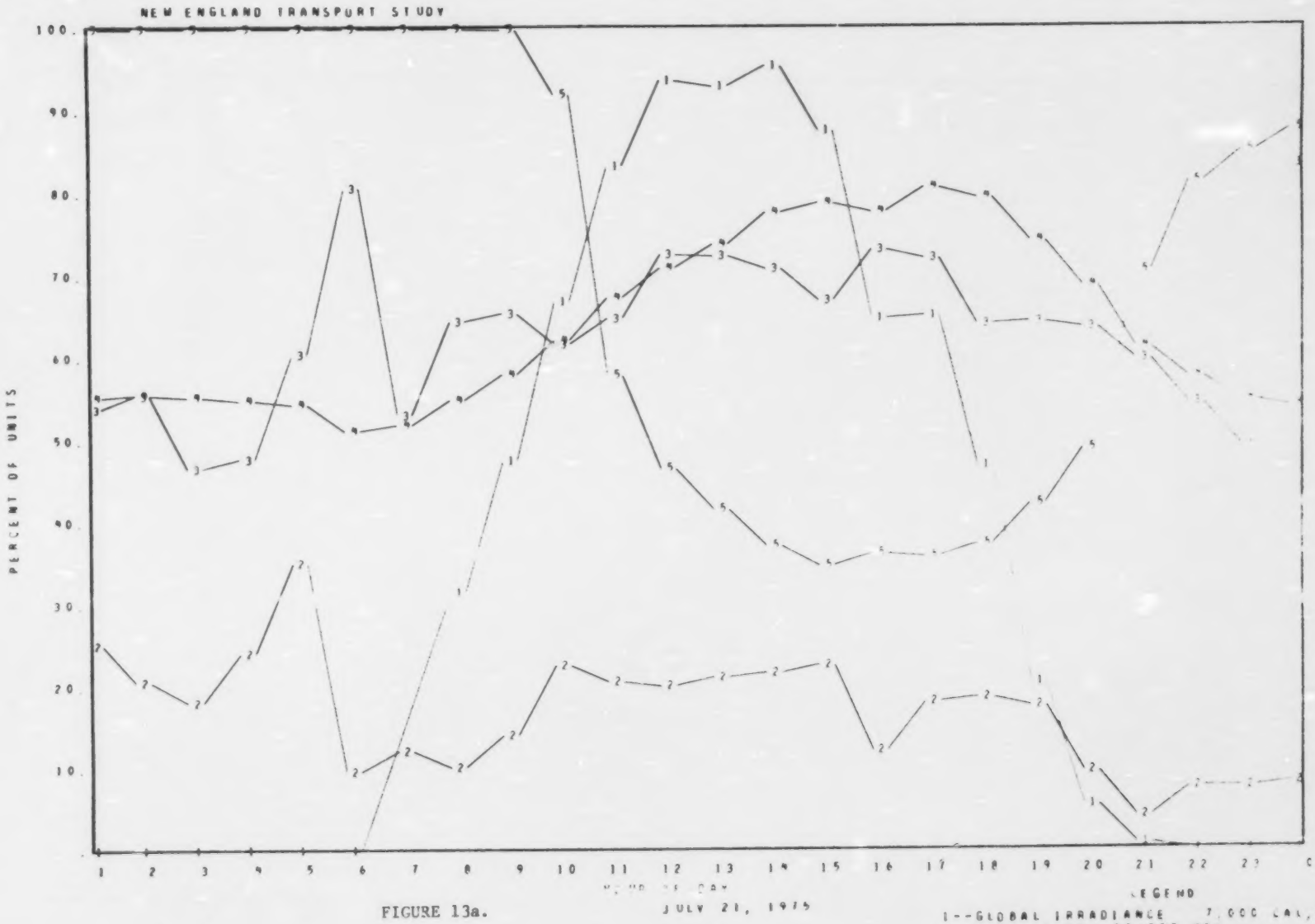
SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.438	23
2--WIND SPEED (MPH)	3.321	24
3--WIND DIRECTION (DEGREES)	227.857	24
4--TEMPERATURE (CENTIGRADE)	25.461	24
5--RELATIVE HUMIDITY (PERCENT)	72.121	24
6--OZONE (PPM)	0.031	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	2.326	24
11--NON-METHANE HYDROCARBON (PPMC)	0.265	17
12--CARBON MONOXIDE (PPM)	0.099	24
19--FLUOROCARBON-11 (PPT)	140.	24
20--CARBON TETRACHLORIDE (PPT)	141.	24

TABLE 9b.

HOUR AVERAGES FOR JULY 21, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	-1.100	2.200	3.325	4.675	5.825	6.550
2--WIND SPEED (MPH)	5.000	4.100	3.600	4.800	7.000	1.900	2.400	2.000	2.800	4.500	4.100	4.000
3--WIND DIRECTION (DEGREES)	194.	199.	167.	172.	217.	290.	191.	232.	235.	222.	233.	261.
4--TEMPERATURE (CENTIGRADE)	22.	22.	22.	22.	22.	20.	21.	22.	23.	25.	27.	28.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	100.	100.	100.	92.	58.	46.
6--OZONE (PPM)	0.022	0.014	0.016	0.020	0.028	0.039	0.026	0.027	0.036	0.043	0.041	0.041
7--NITRIC OXIDE (PPM)	0.001	0.001	0.001	0.001	0.001	.000	0.003	0.003	0.003	0.002	0.002	0.003
8--NITROGEN DIOXIDE (PPM)	0.005	0.005	0.004	0.002	0.001	.000	0.002	0.004	0.002	0.000	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.006	0.006	0.005	0.003	0.001	.000	0.005	0.007	0.005	0.002	0.003	0.004
10--METHANE (PPMC)	2.450	2.540	2.400	2.120	2.210	2.100	2.470	2.160	2.070	2.170	2.090	1.900
11--NON-METHANE HYDROCARBON (PPMC)	-0.004	-0.000	-0.052	0.001	-0.003	-0.004	0.005	0.005	-0.038	-0.071	0.104	0.343
12--CARBON MONOXIDE (PPM)	0.100	0.100	0.100	0.063	0.037	0.050	0.162	0.225	0.050	0.100	0.037	.000
19--FLUOROCARBON-11 (PPT)	167.	167.	163.	150.	148.	128.	130.	141.	118.	128.	128.	141.
20--CARBON TETRACHLORIDE (PPT)	135.	150.	210.	165.	165.	120.	120.	105.	150.	90.	330.	150.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.500	6.675	6.125	4.525	4.550	3.275	1.425	0.375	0.050	.000	.000	.000
2--WIND SPEED (MPH)	4.200	4.300	4.500	2.400	3.600	3.700	3.500	1.900	0.800	1.500	1.500	1.600
3--WIND DIRECTION (DEGREES)	260.	255.	241.	263.	259.	230.	231.	229.	215.	196.	177.	300.
4--TEMPERATURE (CENTIGRADE)	29.	31.	31.	31.	32.	32.	30.	27.	24.	23.	22.	22.
5--RELATIVE HUMIDITY (PERCENT)	41.	37.	35.	36.	36.	37.	42.	49.	70.	81.	85.	88.
6--OZONE (PPM)	0.044	0.050	0.054	0.042	0.037	0.040	0.048	0.040	0.013	0.007	0.004	0.002
7--NITRIC OXIDE (PPM)	0.003	0.004	0.004	0.003	0.005	0.004	0.003	0.002	0.001	0.003	0.003	0.005
8--NITROGEN DIOXIDE (PPM)	0.001	0.002	0.003	0.003	0.000	0.002	0.002	0.003	0.004	0.007	0.012	0.009
9--NITROGEN OXIDES (PPM)	0.004	0.005	0.006	0.006	0.005	0.006	0.005	0.005	0.005	0.011	0.015	0.014
10--METHANE (PPMC)	1.750	1.900	1.750	1.740	1.750	1.900	1.900	2.000	3.200	3.490	4.170	3.590
11--NON-METHANE HYDROCARBON (PPMC)	0.626	0.466	0.431	0.413	0.571	0.564	0.430	0.331	0.051	0.048	0.053	0.051
12--CARBON MONOXIDE (PPM)	0.050	0.050	0.025	0.050	0.063	0.062	.000	0.025	0.100	0.250	0.325	0.350
19--FLUOROCARBON-11 (PPT)	124.	130.	122.	111.	120.	124.	116.	130.	130.	139.	193.	205.
20--CARBON TETRACHLORIDE (PPT)	105.	165.	.	120.	105.	165.	120.	105.	105.	165.	150.	180.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40.
30.
20.
10.
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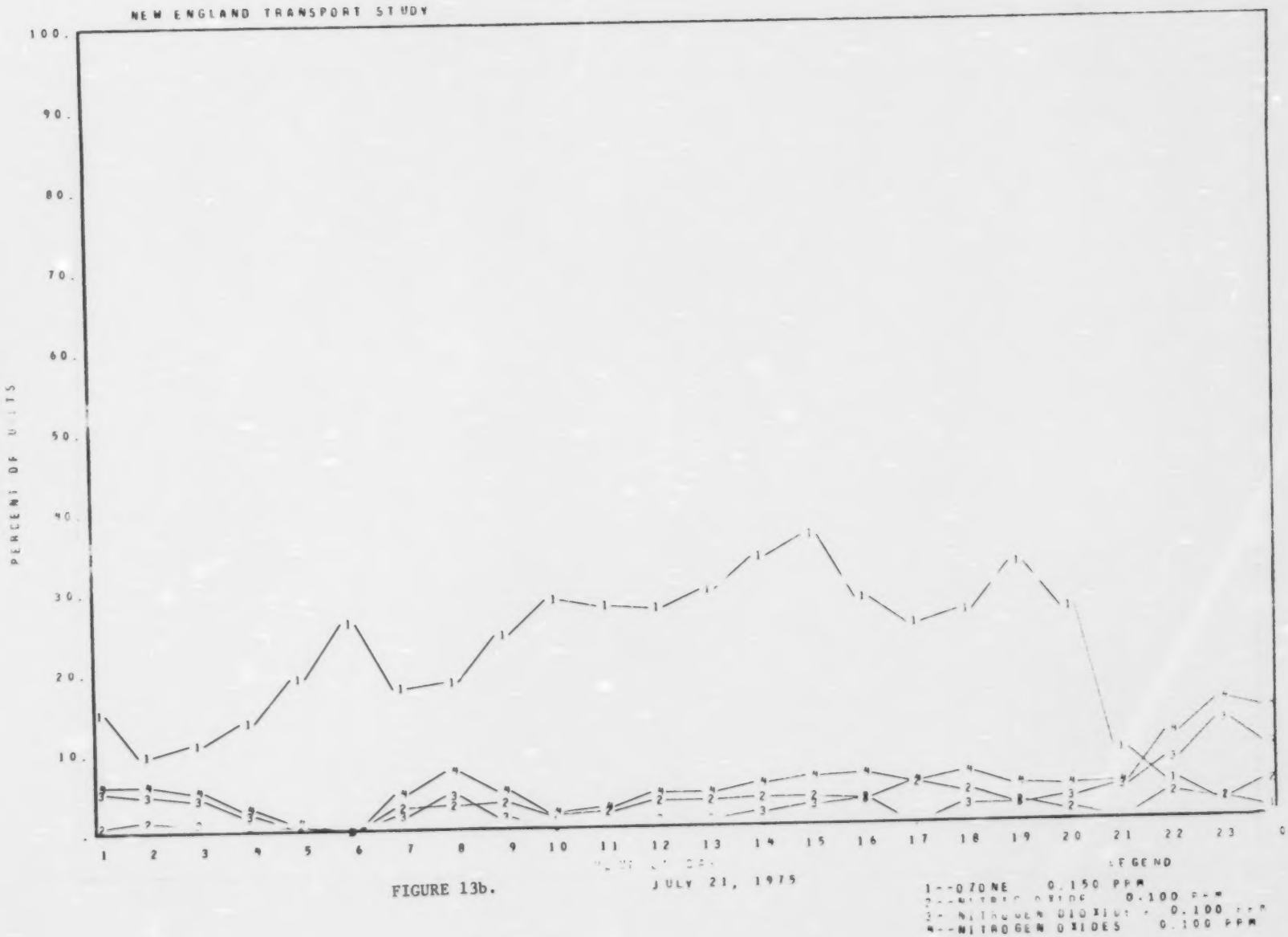
JULY 21, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 LAL/SQ CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 13a.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PERCENT OF UNITS
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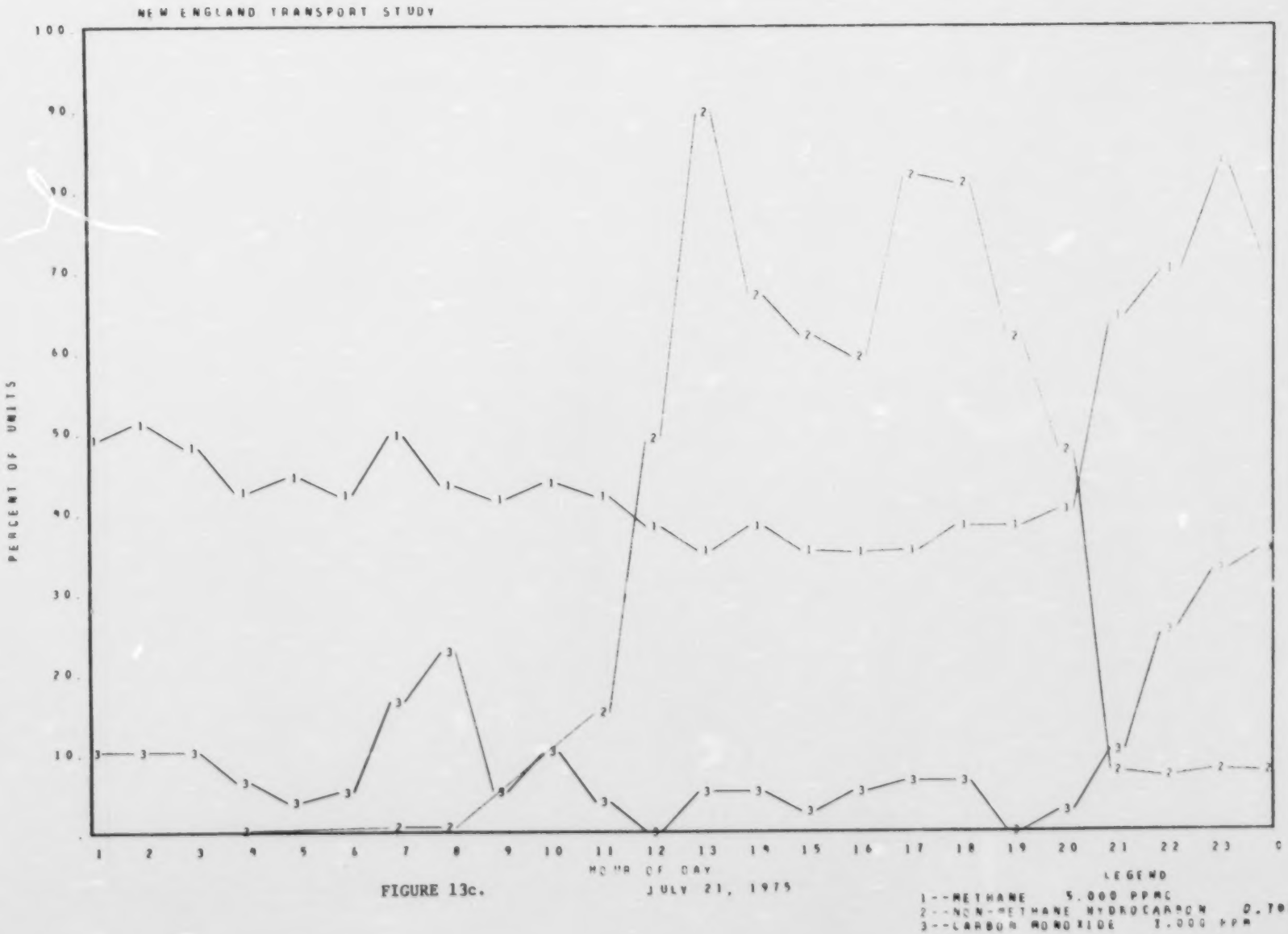
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
JULY 21, 1975
LEGEND
1--OZONE 0.150 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 13b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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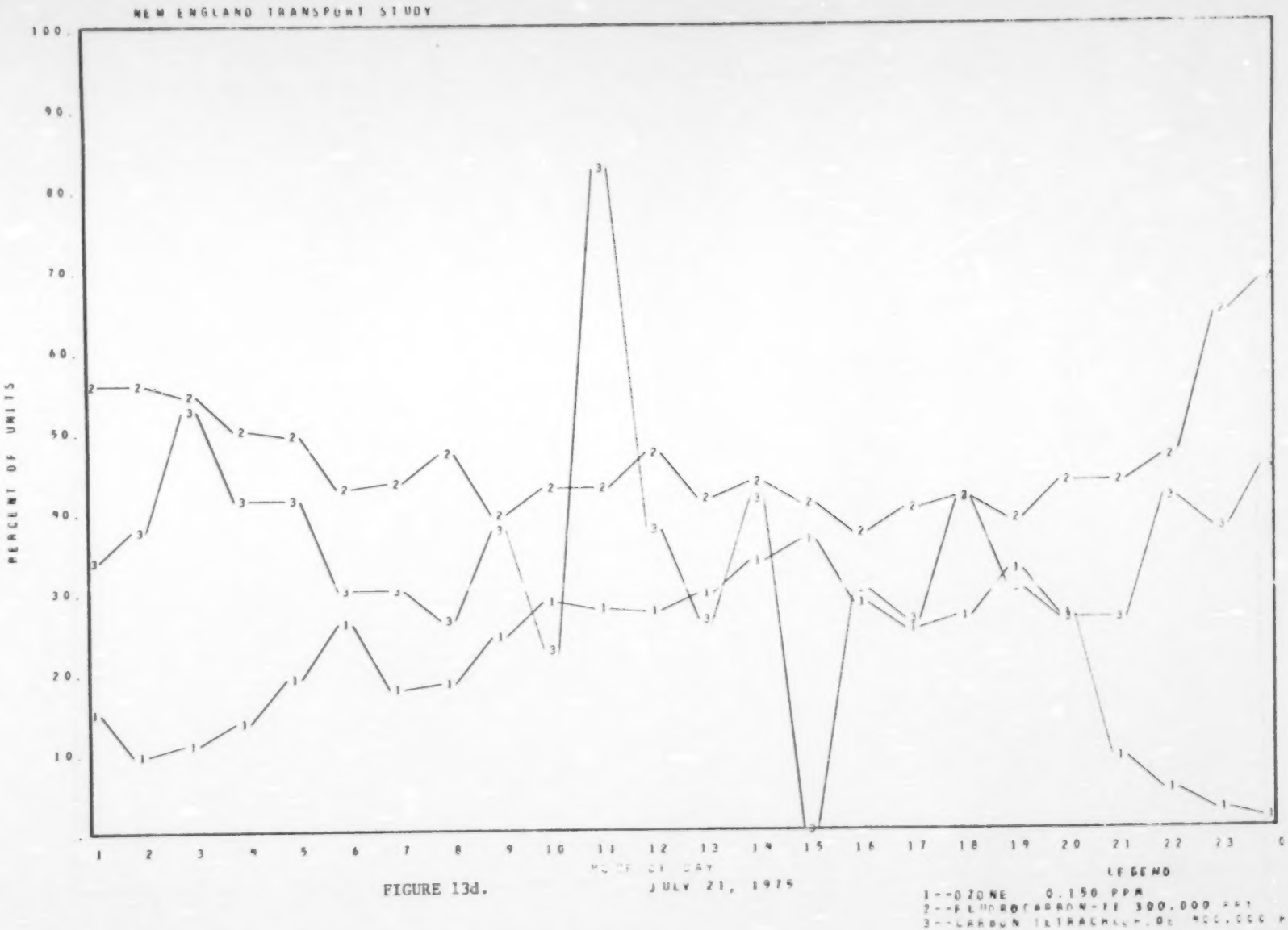
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 21, 1975
LEGEND
1--METHANE 5.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 13c.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
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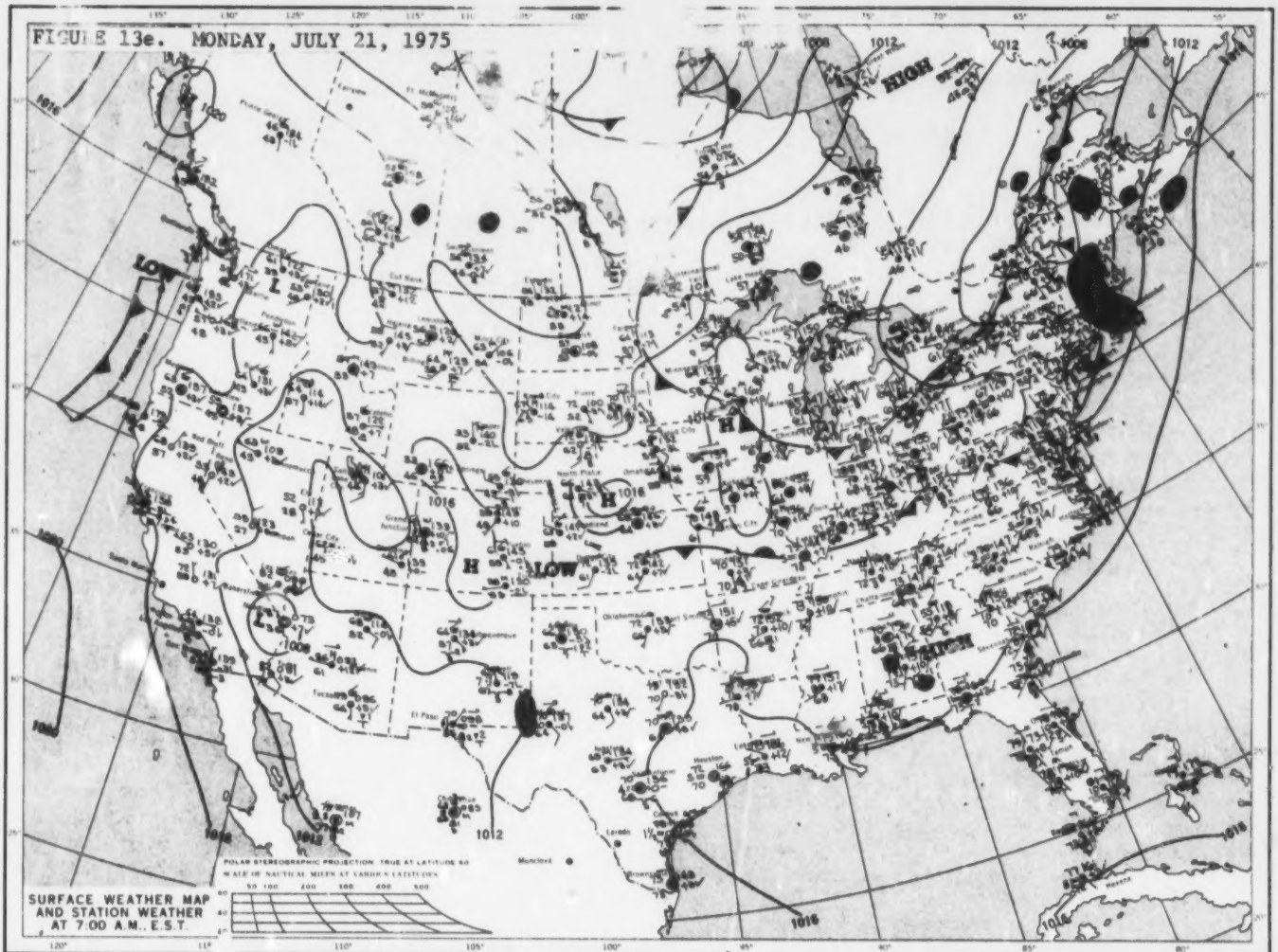
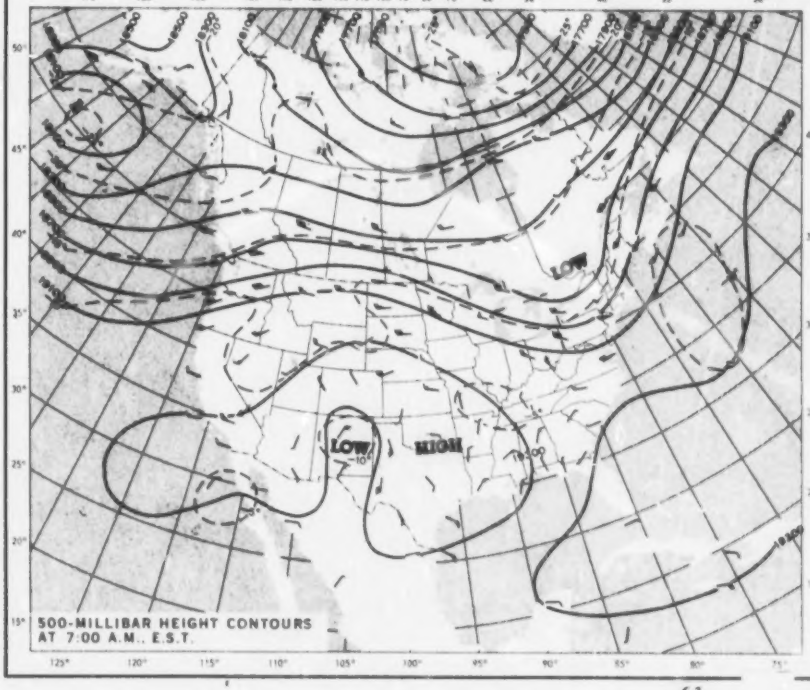
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 21, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 900.000 PPT

FIGURE 13d.

FIGURE 13e. MONDAY, JULY 21, 1975



SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.

HIGHEST AND LOWEST TEMPERATURES

PRECIPITATION AREAS AND AMOUNTS

TABLE 10a. JULY 22. 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.376	24
2--WIND SPEED (MPH)	3.196	24
3--WIND DIRECTION (DEGREES)	273.446	24
4--TEMPERATURE (CENTIGRADE)	25.321	24
5--RELATIVE HUMIDITY (PERCENT)	59.694	24
6--OZONE (PPM)	0.029	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.002	24
9--NITROGEN OXIDES (PPM)	0.004	24
10--METHANE (PPMC)	2.088	17
11--NON-METHANE HYDROCARBON (PPMC)	0.464	17
12--CARBON MONOXIDE (PPM)	0.096	17
19--FLUOROCARBON-11 (PPT)	137.	23
20--CARBON TETRACHLORIDE (PPT)	80.	22

TABLE 10b.

SUBSTANCE	HOUR AVERAGES FOR JULY 22, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.675	2.025	3.550	4.975	5.725	6.300
2--WIND SPEED (MPH)	2.300	1.800	1.900	1.400	2.000	2.500	2.000	3.000	4.100	5.700	6.200	7.500
3--WIND DIRECTION (DEGREES)	299.	219.	255.	244.	215.	167.	224.	298.	342.	300.	308.	313.
4--TEMPERATURE (CENTIGRADE)	21.	21.	21.	20.	20.	20.	21.	24.	26.	28.	29.	30.
5--RELATIVE HUMIDITY (PERCENT)	87.	87.	86.	83.	82.	78.	77.	64.	54.	47.	42.	39.
6--OZONE (PPM)	0.011	0.010	0.022	0.028	0.031	0.034	0.025	0.034	0.044	0.037	0.043	0.042
7--NITRIC OXIDE (PPM)	0.002	0.002	0.003	0.002	0.001	.000	0.002	0.001	0.003	0.001	0.002	0.003
8--NITROGEN DIOXIDE (PPM)	0.008	0.005	0.003	0.001	.000	.000	.000	0.001	.000	0.003	.000	.000
9--NITROGEN OXIDES (PPM)	0.010	0.007	0.005	0.002	0.001	.000	0.002	0.001	0.003	0.003	0.002	0.003
10--METHANE (PPMC)	2.441	2.581	3.147	2.591	3.071	1.818	1.891	1.900	1.923	1.885	1.785	1.778
11--NON-METHANE HYDROCARBON (PPMC)	0.495	0.425	0.559	0.655	0.163	0.351	0.248	0.208	0.285	0.415	0.475	0.722
12--CARBON MONOXIDE (PPM)	0.300	0.250	0.200	0.075	0.100	0.050	0.063	0.063	0.150	0.112	0.033	0.083
19--FLUOROCARBON-11 (PPT)	200.	206.	143.	143.	112.	130.	124.	123.	-125.	128.	105.	105.
20--CARBON TETRACHLORIDE (PPT)	135.	165.	125.	110.	60.	90.	50.	70.	-70.	70.	70.	70.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.500	5.200	6.150	5.925	4.625	3.400	1.750	0.350	0.050	.000	.000	.000
2--WIND SPEED (MPH)	6.700	3.900	5.700	4.300	3.900	3.200	2.400	1.300	1.300	1.200	1.600	0.900
3--WIND DIRECTION (DEGREES)	316.	297.	296.	262.	272.	278.	278.	267.	300.	259.	277.	277.
4--TEMPERATURE (CENTIGRADE)	30.	31.	32.	31.	31.	31.	29.	26.	23.	21.	20.	20.
5--RELATIVE HUMIDITY (PERCENT)	36.	35.	31.	32.	33.	34.	37.	48.	69.	82.	84.	85.
6--OZONE (PPM)	0.037	0.038	0.044	0.039	0.043	0.044	0.041	0.029	0.010	0.001	0.005	0.006
7--NITRIC OXIDE (PPM)	.000	0.004	0.001	0.014	0.003	0.003	0.002	0.004	0.003	0.007	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.003	.000	0.003	.000	0.003	.000	0.002	0.002	0.006	0.006	0.005	0.004
9--NITROGEN OXIDES (PPM)	0.003	0.004	0.004	0.004	0.005	0.003	0.004	0.007	0.008	0.012	0.007	0.006
10--METHANE (PPMC)	1.780	1.786	1.711	1.751	1.669	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
11--NON-METHANE HYDROCARBON (PPMC)	0.497	0.493	0.582	0.655	0.642	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
12--CARBON MONOXIDE (PPM)	.000	0.025	.000	0.100	0.025	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	103.	103.	111.	193.	117.	124.	125.	118.	201.	145.	145.	145.
20--CARBON TETRACHLORIDE (PPT)	10.	10.	90.	-45.	.	60.	80.	68.	127.	120.	120.	60.

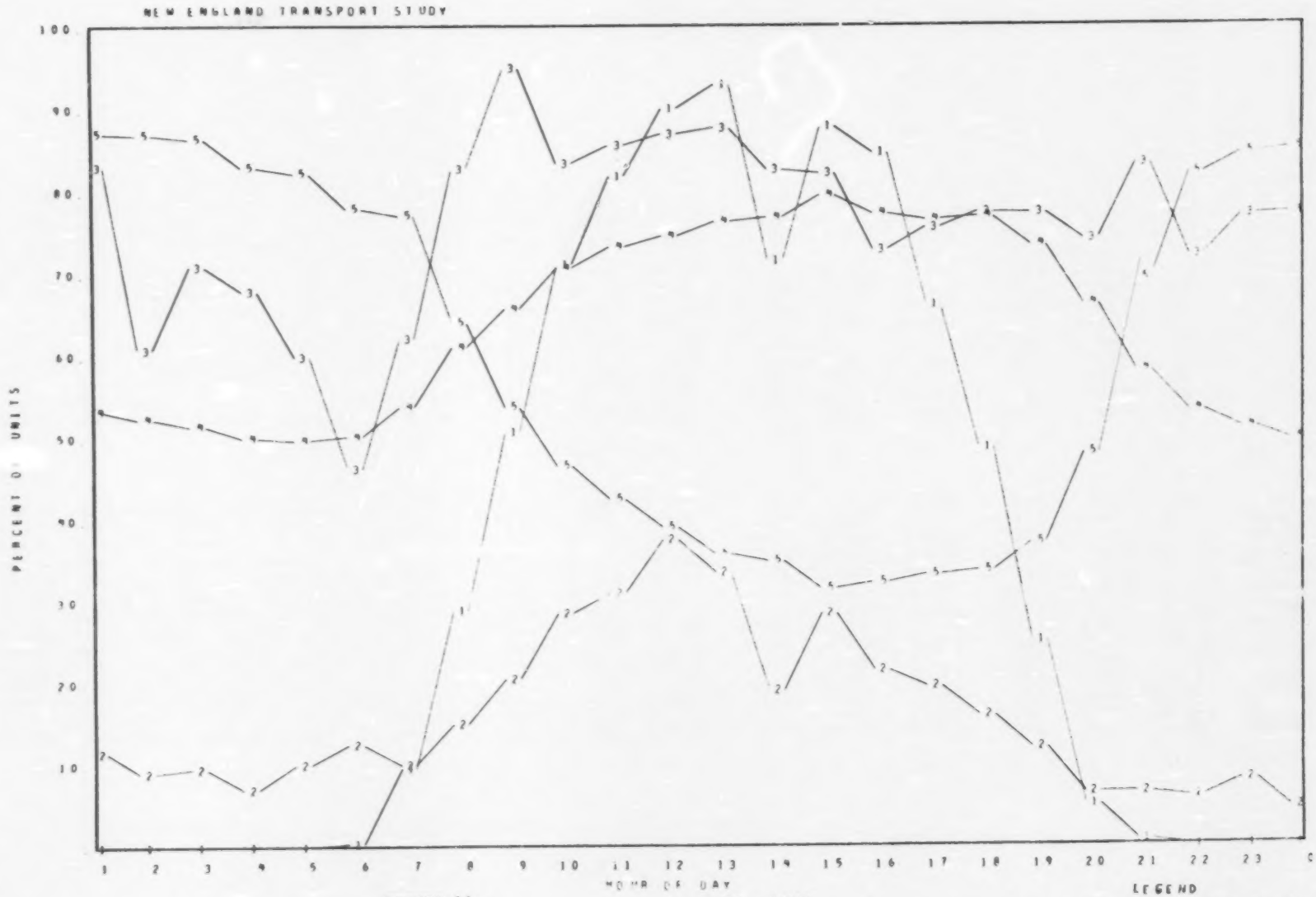

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
JULY 22, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 14a.

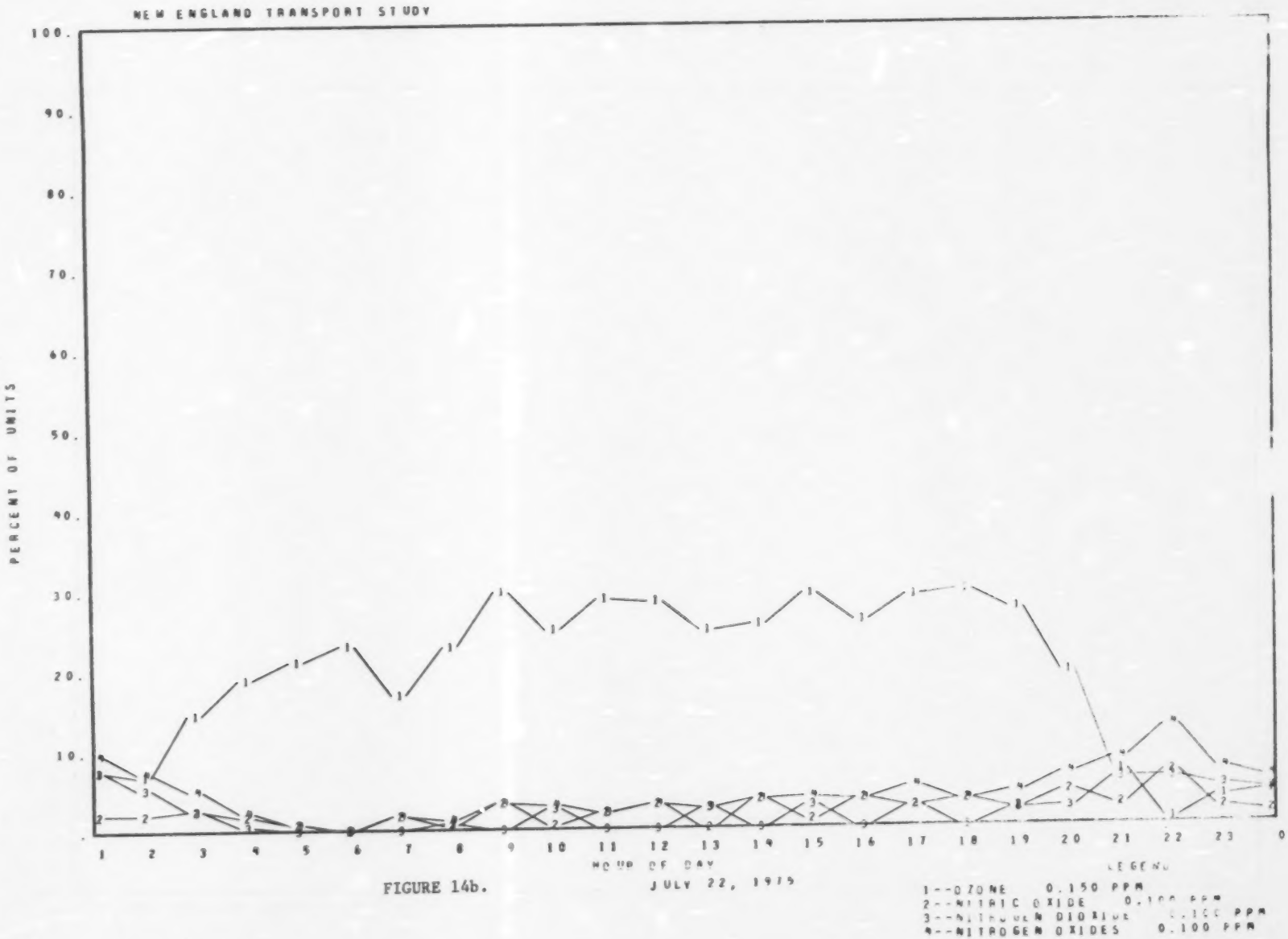
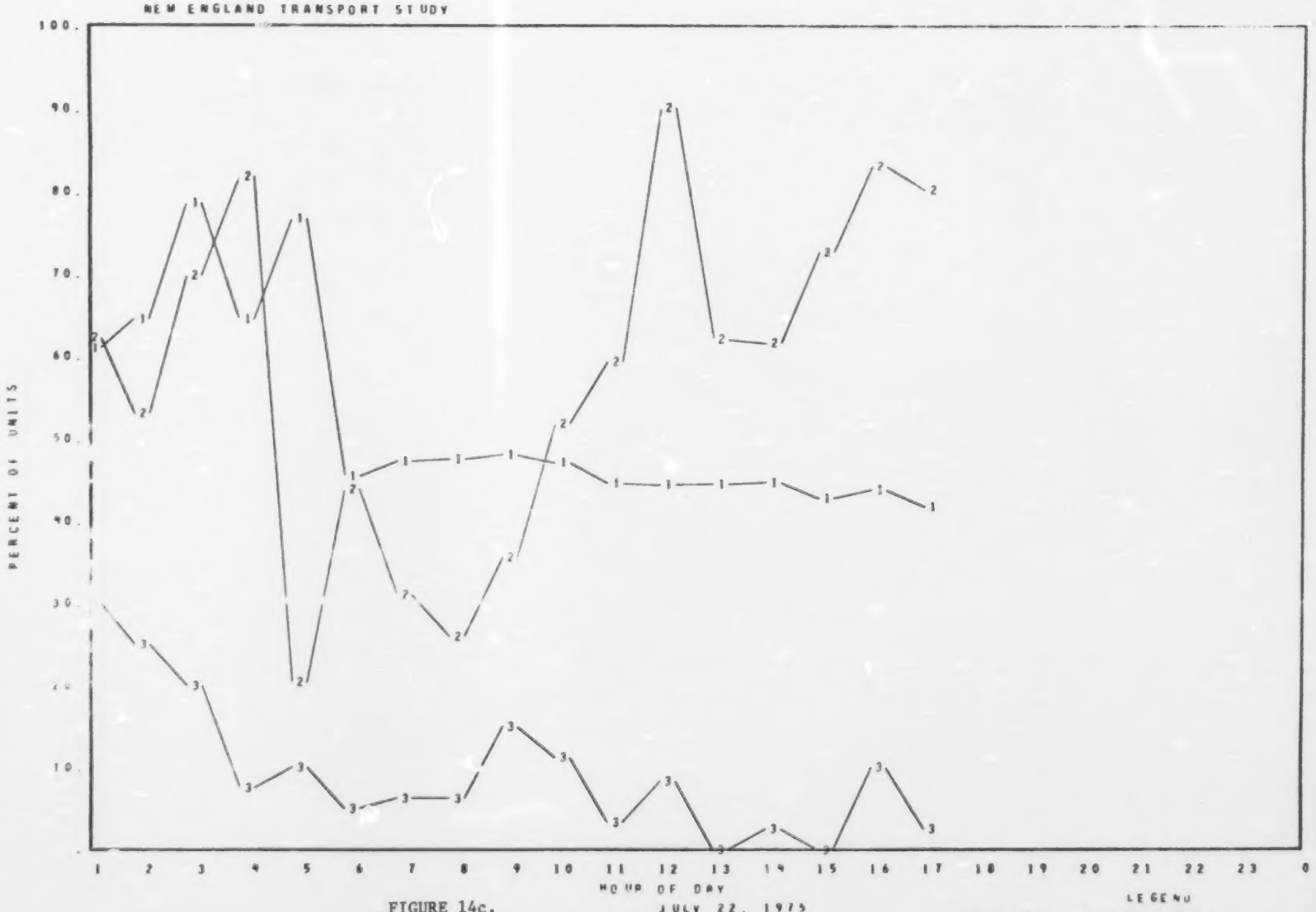

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 22, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 14b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 22, 1975
LEGEND
1--METHANE 4.000 PPMC
2--NON-METHANE HYDROCARBON 0.900 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 14c.

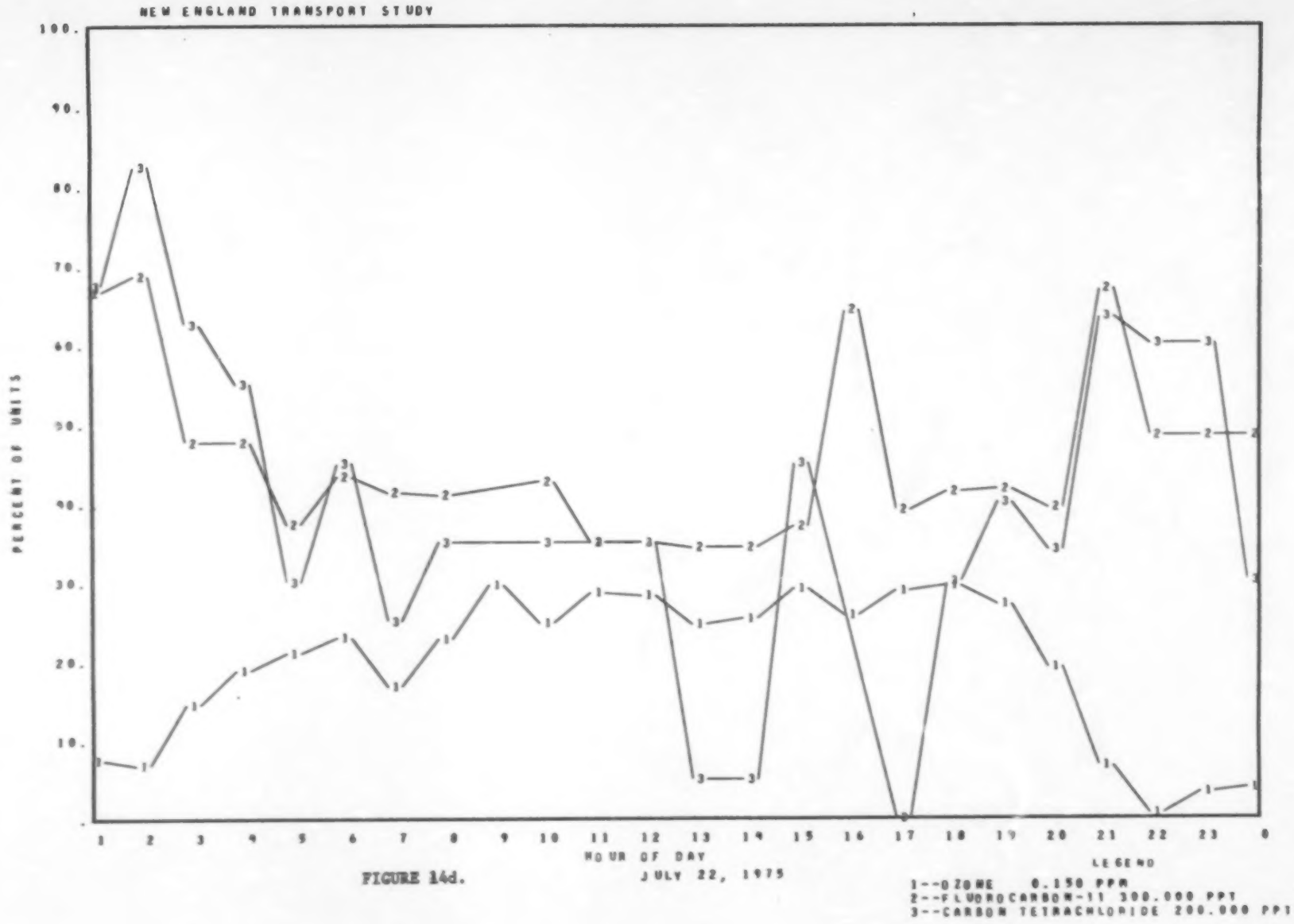

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 22, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 14d.

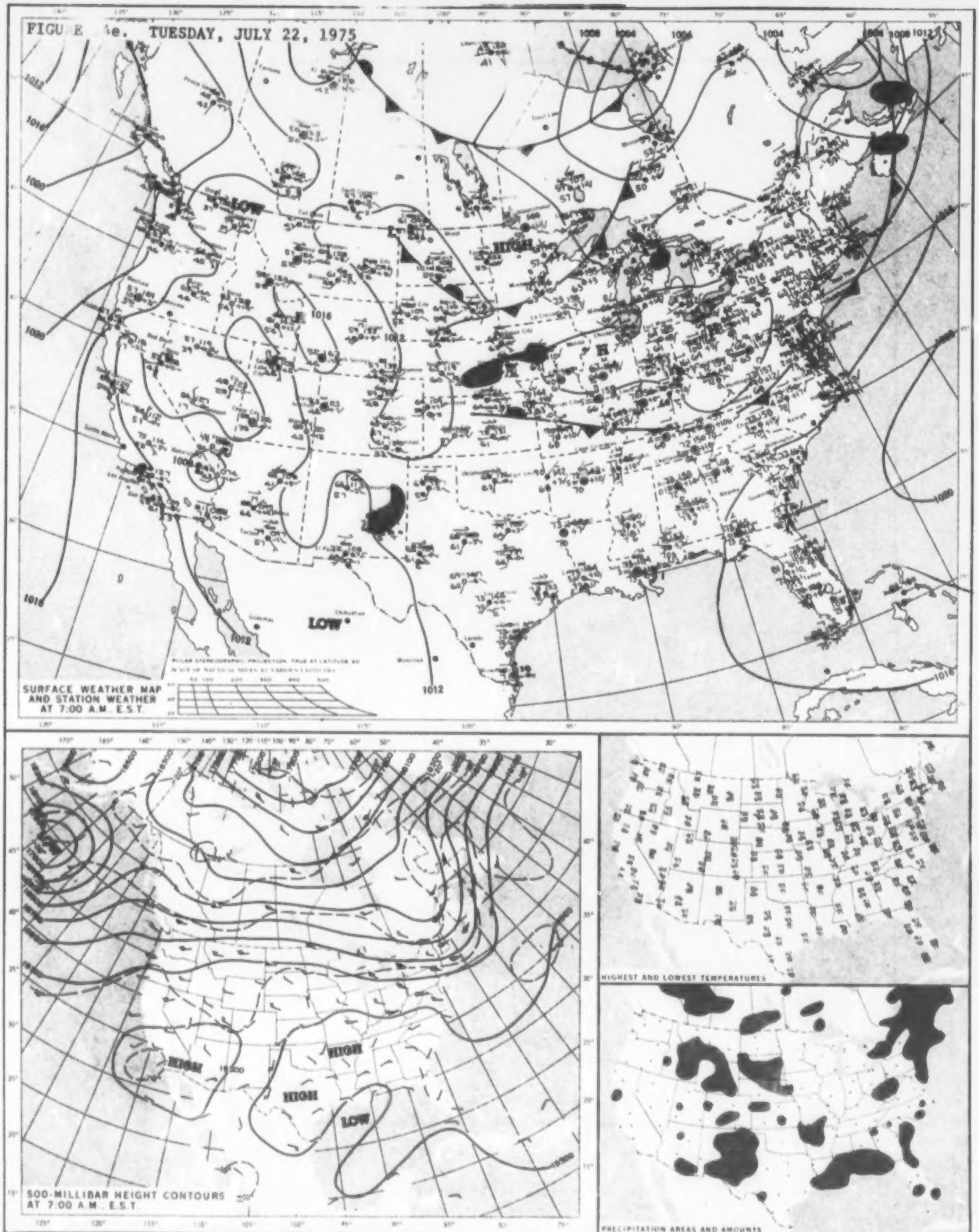


FIGURE 4e. TUESDAY, JULY 22, 1975

TABLE 11a. JULY 23. 1975

SUBSTANCE	AVERAGE	
1 --GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.425	24
2--WIND SPEED (MPH)	2.642	24
3--WIND DIRECTION (DEGREES)	230.336	24
4--TEMPERATURE (CENTIGRADE)	25.271	24
5--RELATIVE HUMIDITY (PERCENT)	65.939	24
6--OZONE (PPM)	0.033	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.007	24
10--METHANE (PPMC)	1.411	10
11--NON-METHANE HYDROCARBON (PPMC)	0.896	10
12--CARBON MONOXIDE (PPM)	0.175	11
19--FLUOROCARBON-11 (PPT)	166.	24
20--CARBON TETRACHLORIDE (PPT)	126.	24

TABLE 11b.

SUBSTANCE	HOUR AVERAGES FOR JULY 23, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.750	2.175	3.575	4.800	5.825	6.450
2--WIND SPEED (MPH)	1.000	0.700	1.000	1.000	1.100	0.800	1.500	1.600	3.000	4.200	4.300	4.900
3--WIND DIRECTION (DEGREES)	270.	257.	273.	331.	318.	310.	320.	226.	192.	231.	200.	195.
4--TEMPERATURE (CENTIGRADE)	19.	18.	17.	16.	16.	16.	18.	22.	25.	27.	29.	31.
5--RELATIVE HUMIDITY (PERCENT)	90.	94.	96.	100.	100.	99.	86.	71.	63.	49.	43.	38.
6--OZONE (PPM)	0.001	0.000	.000	.000	.000	0.001	.000	0.006	0.016	0.033	0.050	0.053
7--NITRIC OXIDE (PPM)	0.003	0.002	0.002	0.000	0.001	0.001	0.006	0.004	0.002	0.002	0.002	0.001
8--NITROGEN DIOXIDE (PPM)	0.007	0.005	0.004	0.002	.000	.000	0.000	0.002	0.003	0.004	0.002	0.002
9--NITROGEN OXIDES (PPM)	0.010	0.007	0.006	0.003	0.001	0.001	0.007	0.005	0.005	0.006	0.003	0.003
10--METHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	1.267	1.516	1.391
11--NON-METHANE HYDROCARBON (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.897	0.818	0.940
12--CARBON MONOXIDE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	.000	0.037	.000
19--FLUOROCARBON-11 (PPT)	436.	144.	142.	133.	129.	129.	183.	150.	138.	107.	129.	114.
20--CARBON TETRACHLORIDE (PPT)	145.	225.	170.	140.	172.	120.	90.	75.	75.	45.	55.	35.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.750	6.775	6.225	5.600	4.300	2.975	1.500	0.425	0.050	.000	.000	.000
2--WIND SPEED (MPH)	4.800	6.500	5.800	6.000	5.000	3.500	2.100	0.800	0.600	0.600	1.000	1.600
3--WIND DIRECTION (DEGREES)	214.	207.	215.	216.	228.	229.	218.	220.	258.	12.	206.	183.
4--TEMPERATURE (CENTIGRADE)	32.	32.	33.	33.	33.	33.	31.	29.	26.	24.	23.	23.
5--RELATIVE HUMIDITY (PERCENT)	35.	35.	36.	36.	38.	40.	42.	53.	72.	87.	90.	90.
6--OZONE (PPM)	0.064	0.068	0.070	0.066	0.076	0.079	0.071	0.056	0.029	0.015	0.015	0.022
7--NITRIC OXIDE (PPM)	0.001	0.002	0.002	0.002	0.003	0.003	0.002	0.003	0.019	0.007	.000	.000
8--NITROGEN DIOXIDE (PPM)	0.002	0.002	0.002	0.006	0.006	0.007	0.006	0.008	0.011	0.009	0.012	0.009
9--NITROGEN OXIDES (PPM)	0.003	0.003	0.004	0.008	0.009	0.010	0.008	0.010	0.030	0.016	0.012	0.009
10--METHANE (PPMC)	1.410	1.503	1.495	1.475	1.374	1.423	1.254	-1.000	-1.000	-1.000	-1.000	-1.000
11--NON-METHANE HYDROCARBON (PPMC)	0.790	0.803	0.805	0.955	0.932	0.876	1.141	-1.000	-1.000	-1.000	-1.000	-1.000
12--CARBON MONOXIDE (PPM)	0.033	.000	0.067	0.062	0.062	0.050	-0.187	-0.323	-0.460	-0.597	0.733	0.883
19--FLUOROCARBON-11 (PPT)	112.	109.	129.	135.	134.	134.	150.	305.	209.	209.	228.	206.
20--CARBON TETRACHLORIDE (PPT)	35.	30.	75.	90.	120.	156.	120.	165.	300.	215.	158.	205.

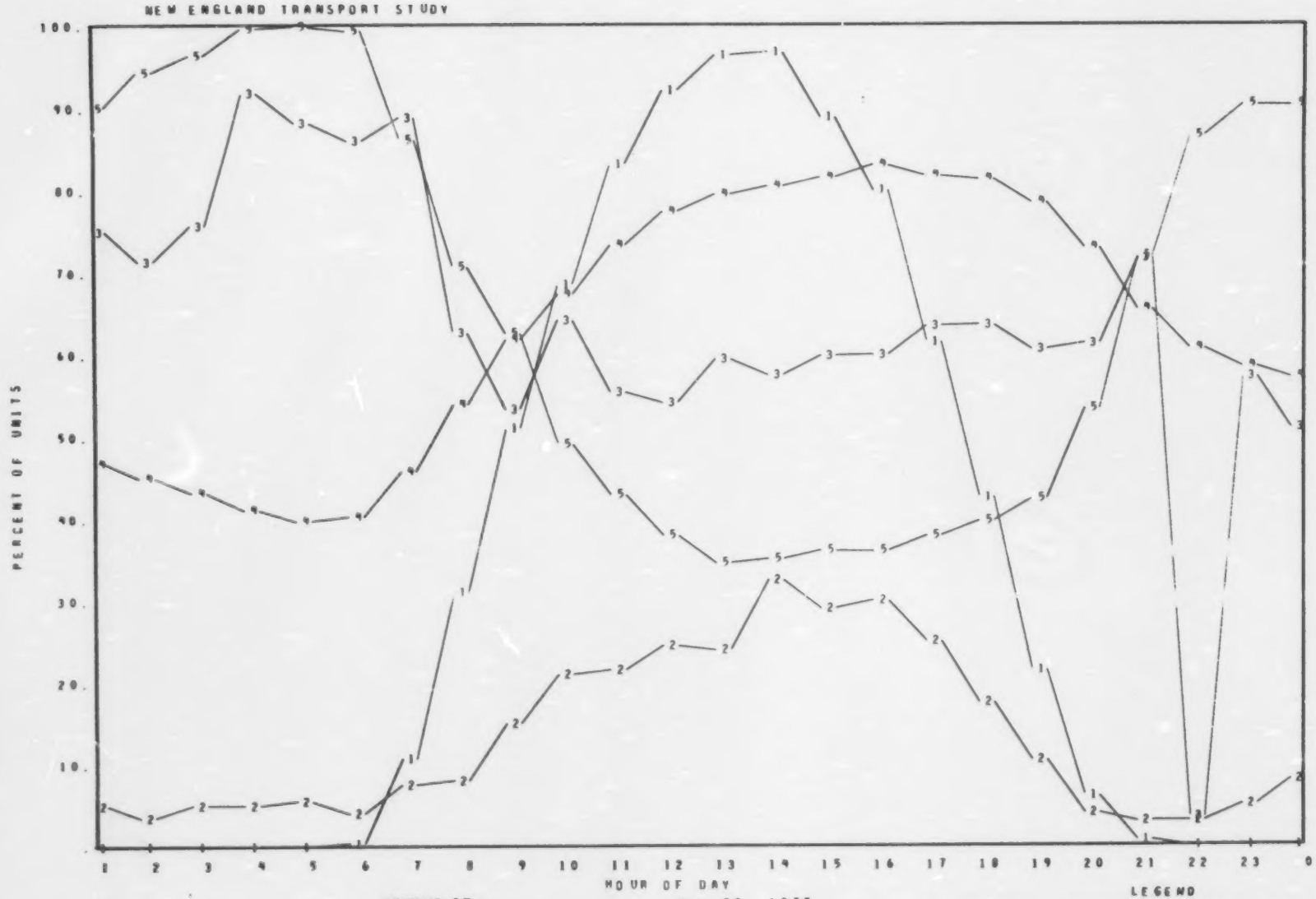
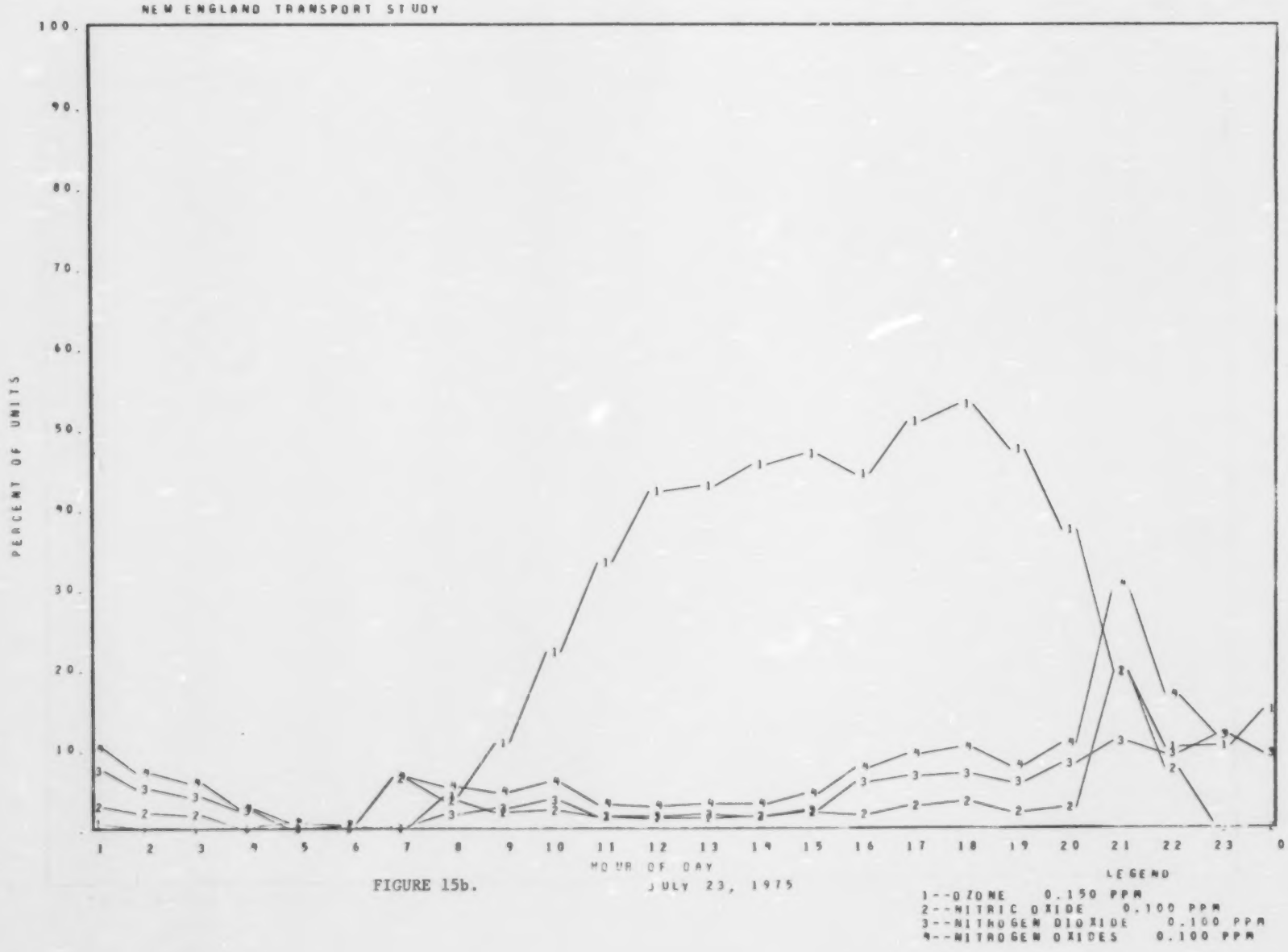

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 23, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 15a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 23, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 15b.

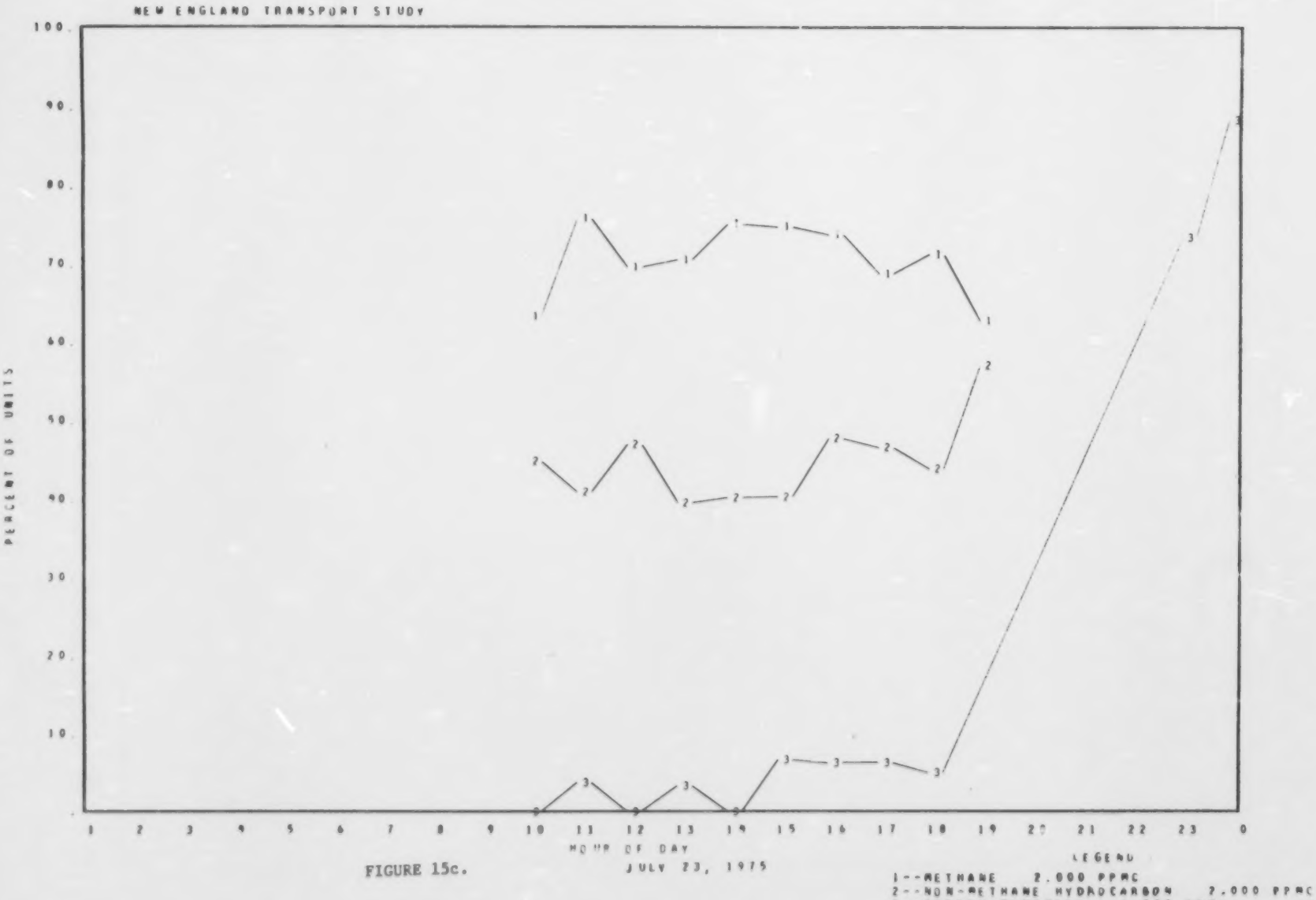
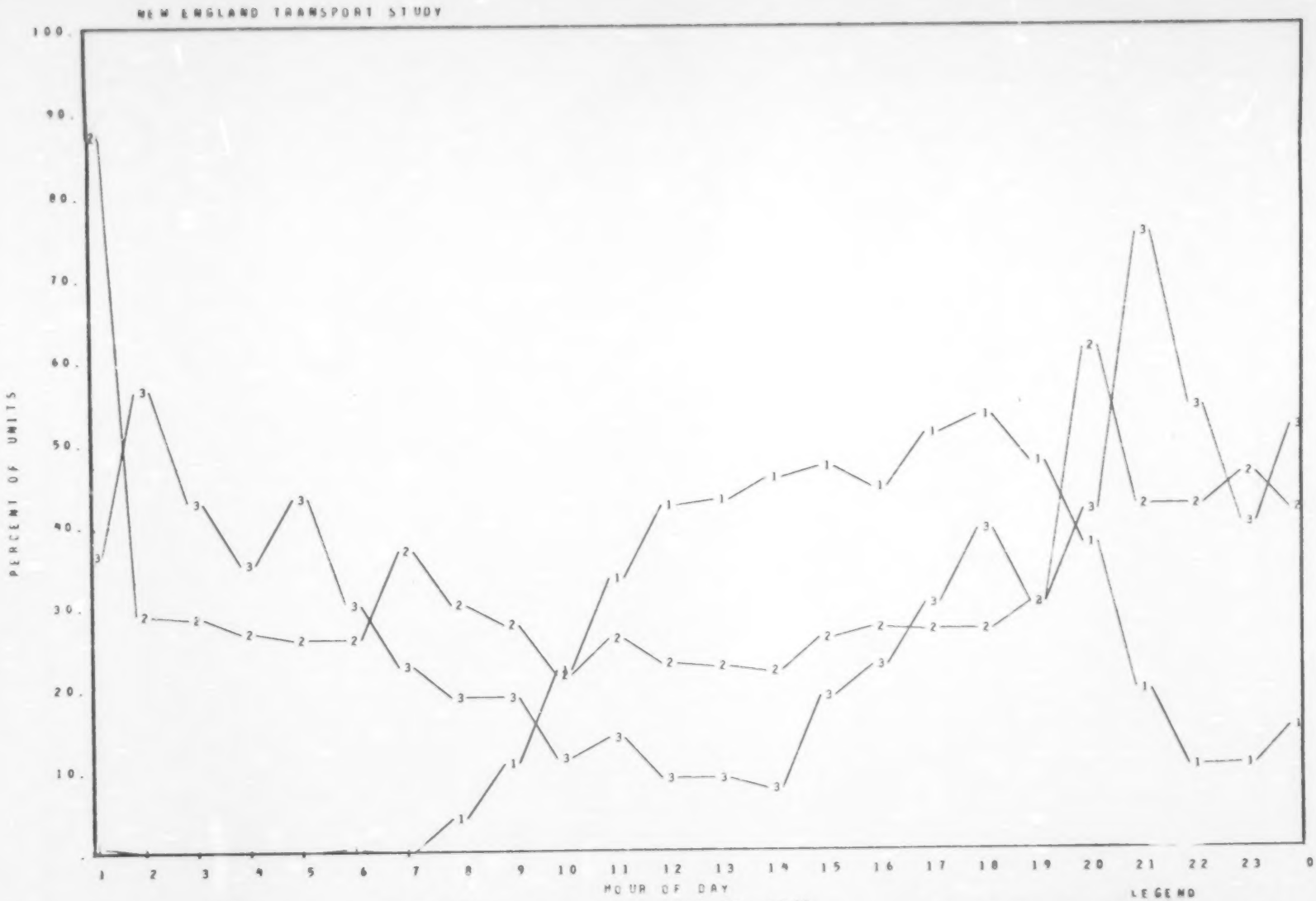

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 23, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 15c.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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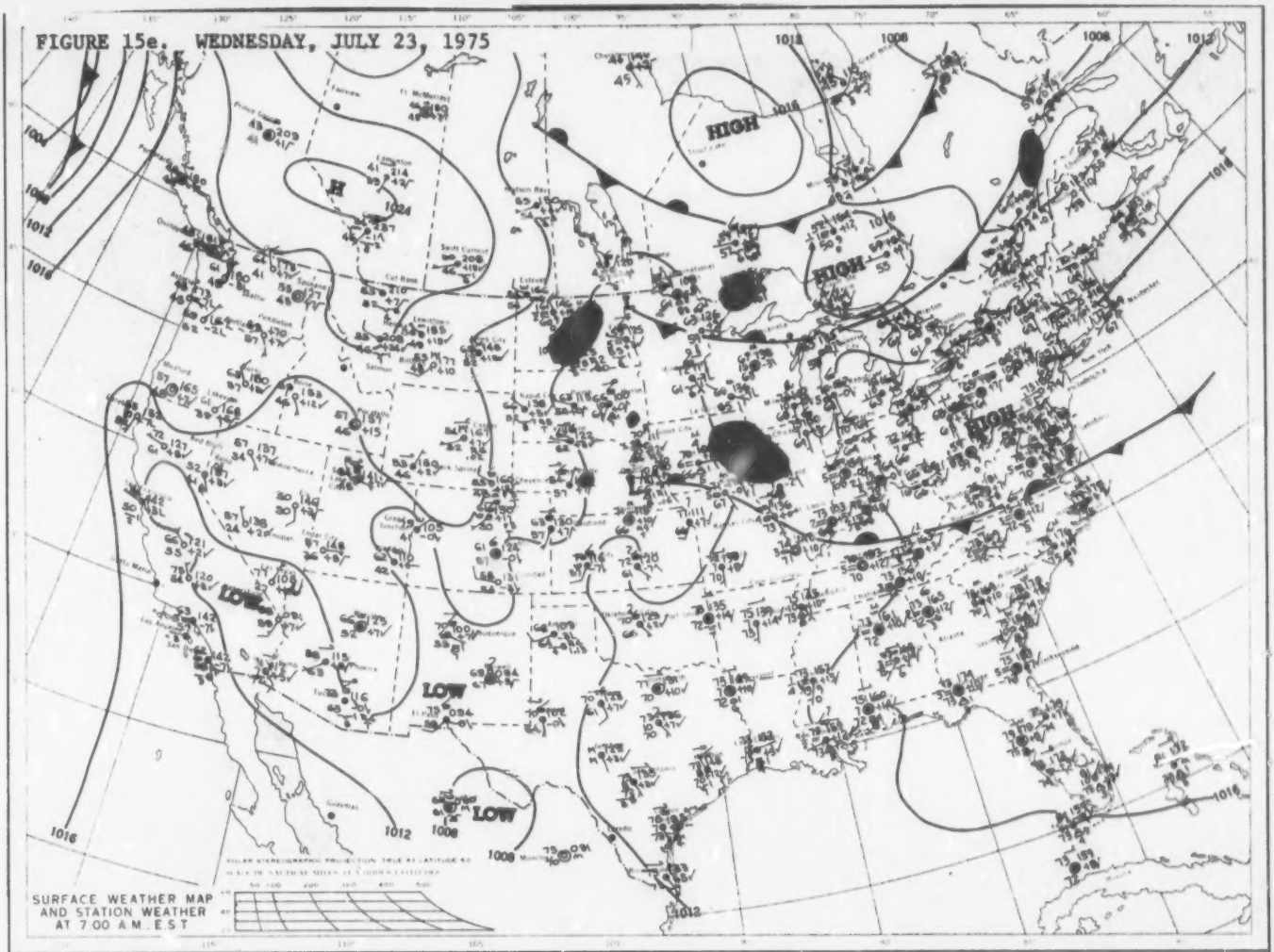
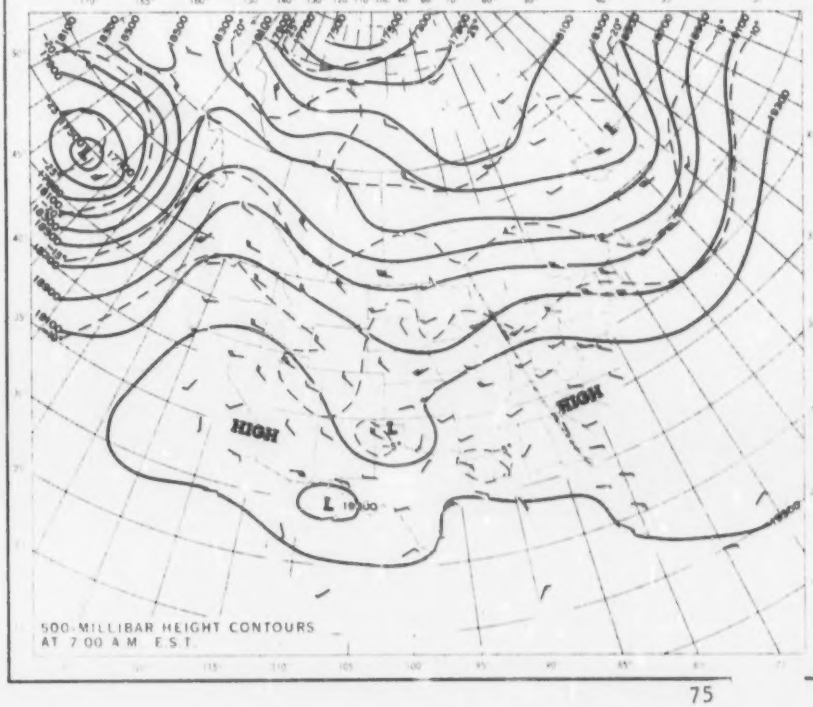
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 23, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 500.000 PPT
3--CARBON TETRACHLORIDE 900.000 PPT

FIGURE 15d.

FIGURE 15e. WEDNESDAY, JULY 23, 1975



SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M. E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M. E.S.T.

HIGHEST AND LOWEST TEMPERATURES

PRECIPITATION AREAS AND AMOUNTS

TABLE 12a. JULY 24, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.166	24
2--WIND SPEED (MPH)	6.679	24
3--WIND DIRECTION (DEGREES)	187.571	24
4--TEMPERATURE (CENTIGRADE)	26.937	24
5--RELATIVE HUMIDITY (PERCENT)	65.822	24
6--OZONE (PPM)	0.062	24
7--NITRIC OXIDE (PPM)	0.000	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.004	24
10--METHANE (PPMC)	1.625	24
11--NON-METHANE HYDROCARBON (PPMC)	1.142	24
12--CARBON MONOXIDE (PPM)	0.190	16
19--FLUOROCARBON-11 (PPT)	216.	22
20--CARBON TETRACHLORIDE (PPT)	194.	22

TABLE 12b.

HOUR AVERAGES FOR JULY 24, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.650	1.775	2.950	4.300	4.875	4.750
2--WIND SPEED (MPH)	1.600	1.000	2.700	2.800	2.500	3.100	2.900	4.400	5.500	6.100	6.800	8.300
3--WIND DIRECTION (DEGREES)	166.	290.	190.	162.	185.	153.	154.	171.	183.	179.	195.	200.
4--TEMPERATURE (CENTIGRADE)	22.	22.	22.	22.	22.	22.	23.	25.	27.	29.	30.	31.
5--RELATIVE HUMIDITY (PERCENT)	89.	91.	89.	89.	89.	89.	84.	77.	68.	59.	51.	47.
6--OZONE (PPM)	0.024	0.026	0.036	0.041	0.040	0.031	0.025	0.037	0.051	0.068	0.086	0.089
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	.000	.000	.000	0.003	0.002	.000
8--NITROGEN DIOXIDE (PPM)	0.010	0.008	0.006	0.004	0.002	0.004	0.007	0.007	0.007	0.011	0.007	0.005
9--NITROGEN OXIDES (PPM)	0.010	0.008	0.006	0.004	0.002	0.004	0.007	0.007	0.007	0.014	0.009	0.005
10--METHANE (PPMC)	2.390	1.590	2.580	1.810	2.910	1.910	1.650	1.750	1.800	1.750	1.550	1.500
11--NON-METHANE HYDROCARBON (PPMC)	0.881	1.095	1.124	0.948	1.013	0.943	1.063	1.064	1.038	1.161	1.126	1.150
12--CARBON MONOXIDE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	1.000	0.925	0.662	0.100	0.050
19--FLUOROCARBON-11 (PPT)	266.	248.	306.	268.	294.	249.	256.	279.	292.	265.	-239.	-212.
20--CARBON TETRACHLORIDE (PPT)	255.	300.	240.	300.	274.	285.	326.	187.	214.	176.	-162.	-149.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.075	6.350	6.200	5.400	4.225	2.850	1.150	0.275	0.100	0.025	.000	.000
2--WIND SPEED (MPH)	9.200	9.200	9.300	10.200	10.500	10.400	9.600	9.100	10.100	9.200	8.200	7.300
3--WIND DIRECTION (DEGREES)	195.	185.	188.	189.	185.	191.	191.	186.	190.	190.	190.	195.
4--TEMPERATURE (CENTIGRADE)	32.	32.	33.	32.	31.	30.	28.	27.	26.	26.	26.	25.
5--RELATIVE HUMIDITY (PERCENT)	45.	43.	39.	38.	42.	51.	58.	61.	66.	69.	71.	74.
6--OZONE (PPM)	0.102	0.128	0.129	0.117	0.122	0.108	0.082	0.067	0.037	0.022	0.012	0.009
7--NITRIC OXIDE (PPM)	.000	.000	0.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
8--NITROGEN DIOXIDE (PPM)	0.002	0.003	0.001	.000	0.000	0.002	0.002	0.002	.000	.000	0.002	0.002
9--NITROGEN OXIDES (PPM)	0.002	0.003	0.002	.000	0.000	0.002	0.002	0.002	.000	.000	0.002	0.002
10--METHANE (PPMC)	1.450	1.450	1.450	1.350	1.300	1.300	1.250	1.250	1.250	1.250	1.250	1.250
11--NON-METHANE HYDROCARBON (PPMC)	1.135	1.063	1.054	1.061	1.066	1.028	4.006	1.710	0.698	0.606	0.664	0.714
12--CARBON MONOXIDE (PPM)	.000	0.013	0.013	.000	.000	0.013	-0.019	0.025	0.013	0.025	0.100	0.100
19--FLUOROCARBON-11 (PPT)	186.	213.	196.	199.	174.	182.	163.	167.	142.	134.	139.	134.
20--CARBON TETRACHLORIDE (PPT)	135.	135.	120.	240.	120.	140.	112.	120.	115.	170.	150.	150.

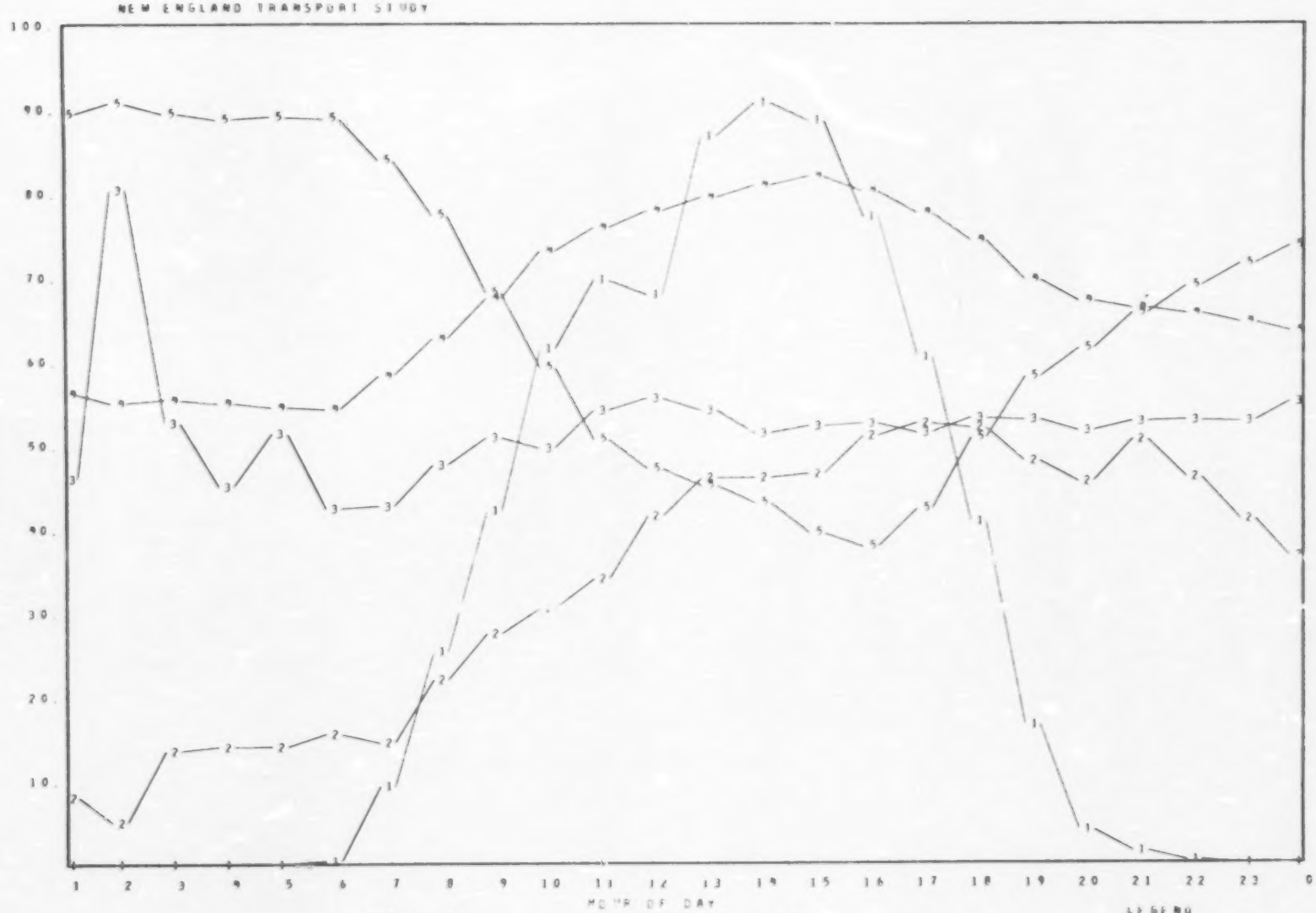

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
JULY 29, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 16a.

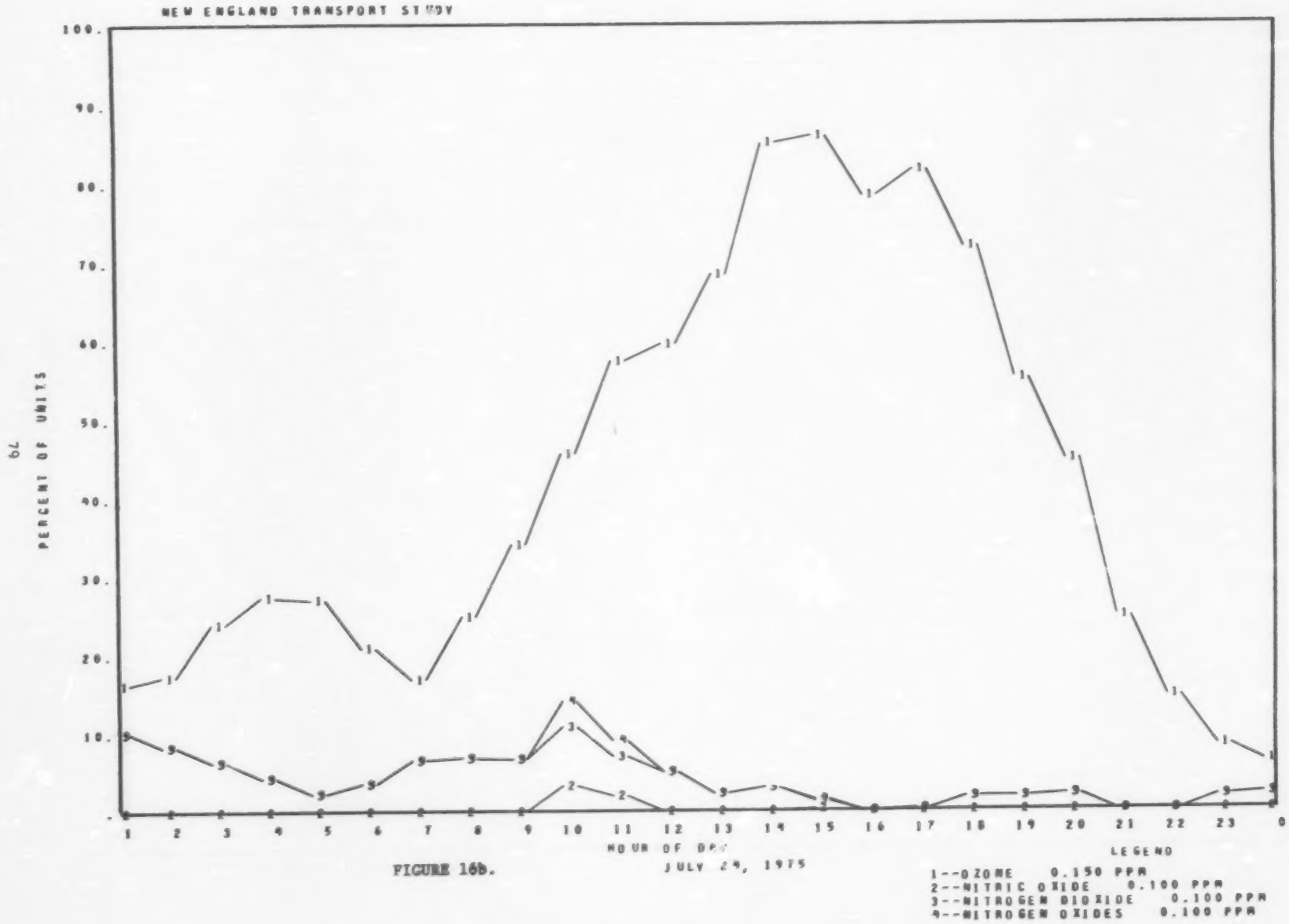

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 24, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 16b.

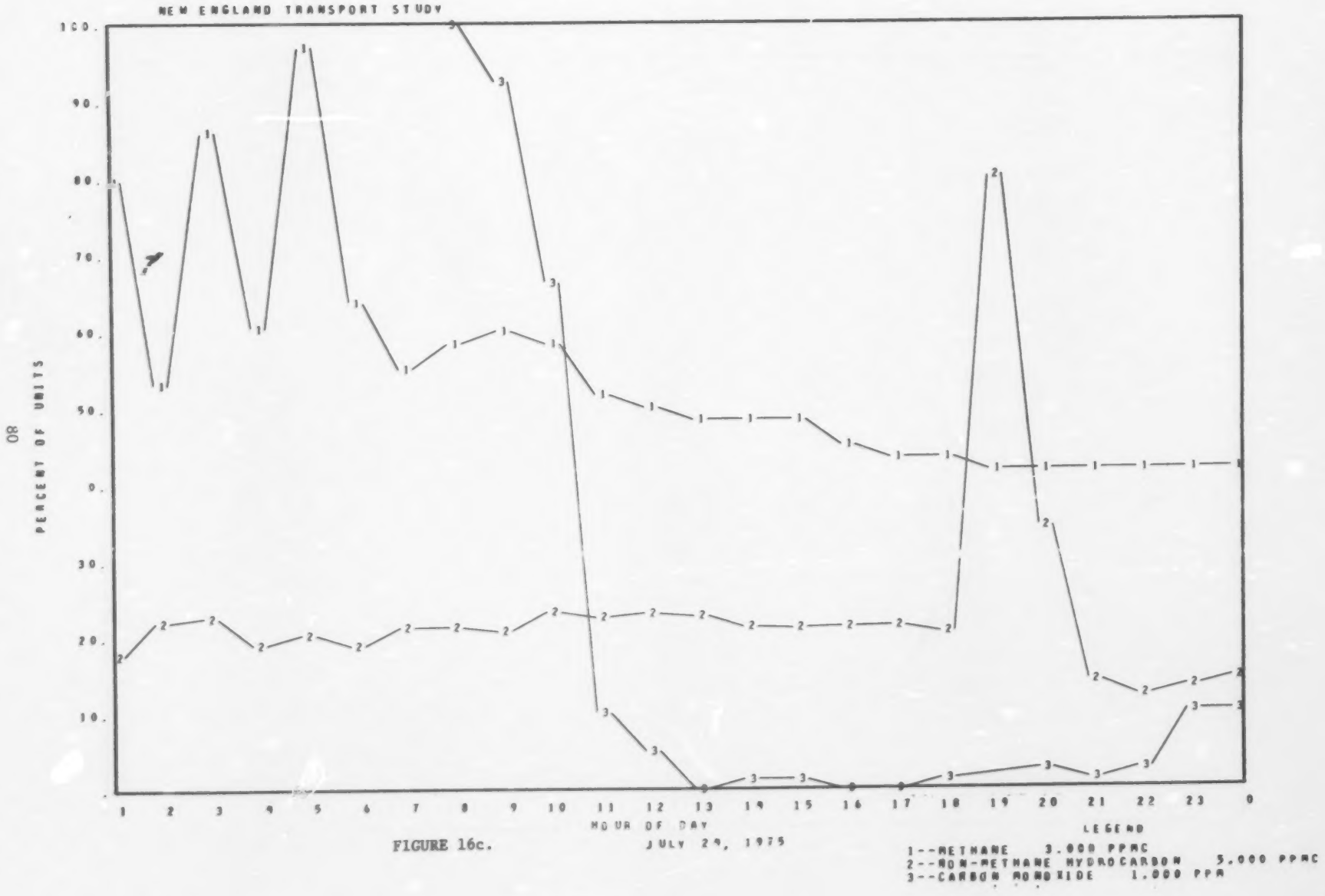

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
0.
30.
20.
10.
PERCENT OF UNITS
OR
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 29, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 5.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 16c.

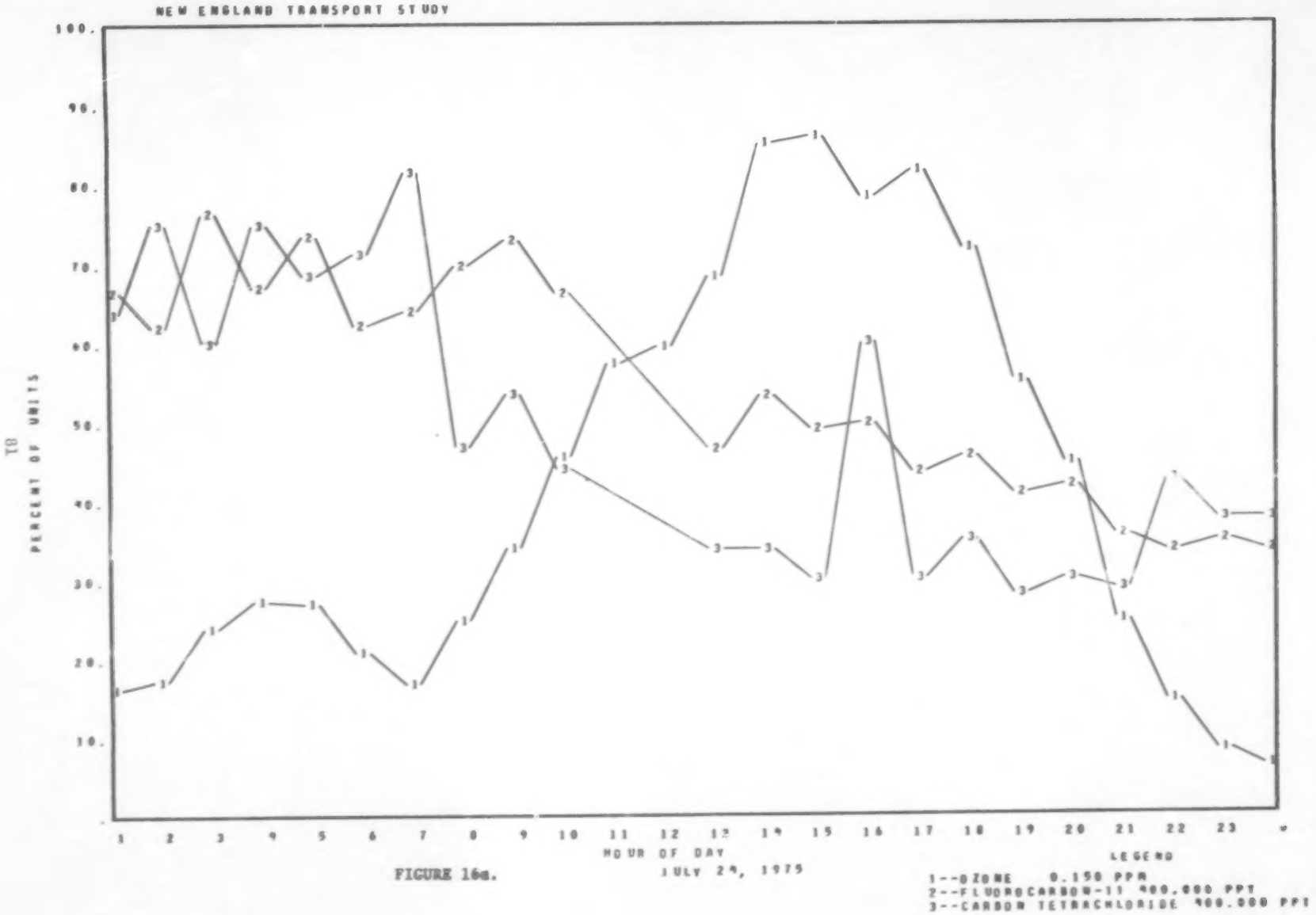
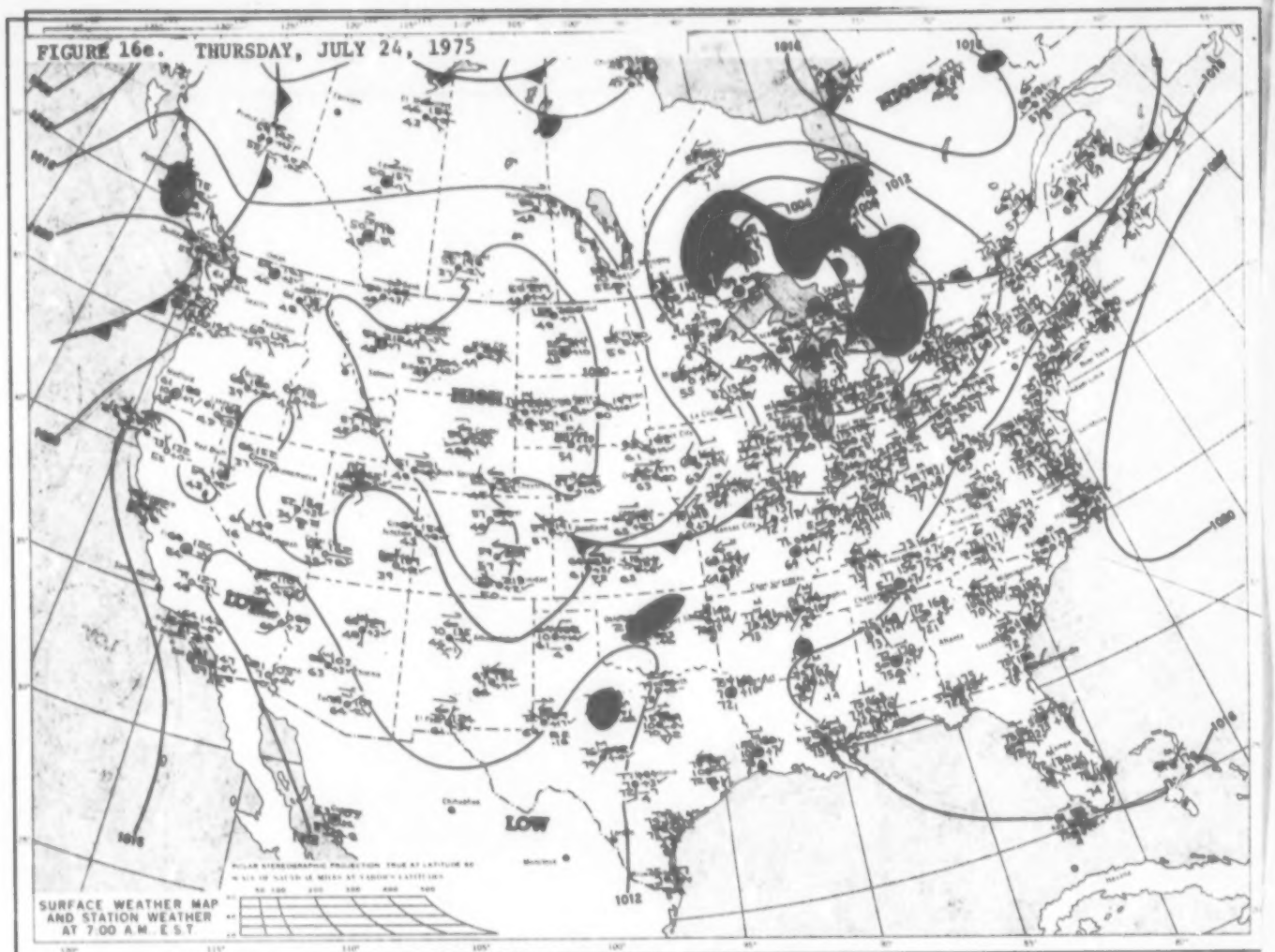

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
HOUR OF DAY
JULY 29, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 400,000 PPT
3--CARBON TETRACHLORIDE 900,000 PPT

FIGURE 16a.

FIGURE 16e. THURSDAY, JULY 24, 1975



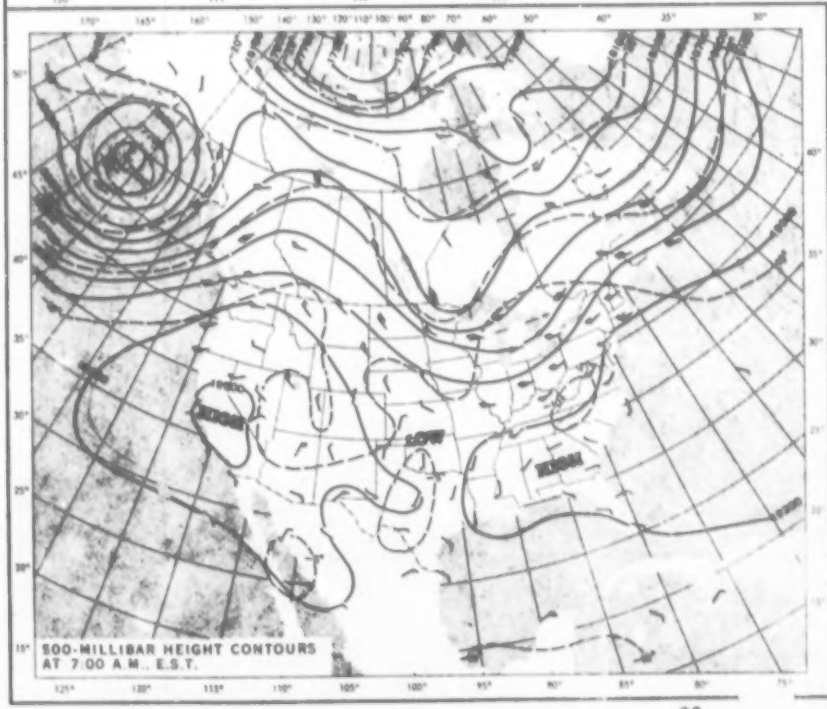


TABLE 13a. JULY 25, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.755	24
2--WIND SPEED (MPH)	4.175	24
3--WIND DIRECTION (DEGREES)	220.417	24
4--TEMPERATURE (CENTIGRADE).	22.810	24
5--RELATIVE HUMIDITY (PERCENT)	87.477	24
6--OZONE (PPM)	0.035	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.340	24
11--NON-METHANE HYDROCARBON (PPMC)	0.673	24
12--CARBON MONOXIDE (PPM)	0.134	21
19--FLUOROCARBON-11 (PPT)	160.	24
20--CARBON TETRACHLORIDE (PPT)	160.	24

TABLE 13b.

SUBSTANCE	HOUR AVERAGES FOR JULY 25, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.075	0.550	1.100	0.800	[illegible]	1.400
2--WIND SPEED (MPH)	2.700	2.800	4.700	4.300	5.400	4.800	5.000	4.600	5.600	5.000	[illegible]	5.300
3--WIND DIRECTION (DEGREES)	252.	188.	189.	181.	195.	184.	190.	209.	206.	209.	[illegible]	200.
4--TEMPERATURE (CENTIGRADE)	22.	21.	21.	21.	21.	21.	21.	21.	22.	23.	[illegible]	24.
5--RELATIVE HUMIDITY (PERCENT)	93.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.030	0.033	0.040	0.047	0.045	0.044	0.041	0.034	0.034	0.035	[illegible]	0.031
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	.000	.000	.000	0.000	[illegible]	0.002
8--NITROGEN DIOXIDE (PPM)	.000	.000	.000	.000	.000	.000	.000	0.003	0.002	0.003	[illegible]	0.007
9--NITROGEN OXIDES (PPM)	.000	.000	.000	.000	.000	.000	.000	0.003	0.002	0.004	0.007	0.010
10--METHANE (PPMC)	1.150	1.450	1.450	1.250	1.450	1.450	1.450	1.400	1.450	1.300	1.350	1.350
11--NON-METHANE HYDROCARBON (PPMC)	0.709	0.544	0.526	0.618	0.621	0.541	0.616	0.718	0.653	0.646	0.650	0.650
12--CARBON MONOXIDE (PPM)	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.162	0.125	0.150	-0.125	-0.100
19--FLUOROCARBON-11 (PPT)	134.	127.	123.	120.	113.	123.	122.	129.	152.	146.	150.	154.
20--CARBON TETRACHLORIDE (PPT)	180.	120.	155.	105.	110.	120.	120.	150.	175.	120.	120.	135.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.075	1.900	2.075	2.425	2.150	1.025	1.250	0.350	0.100	.000	.000	.000
2--WIND SPEED (MPH)	4.900	5.500	5.300	6.300	6.000	3.100	3.900	3.600	1.800	1.400	1.100	2.000
3--WIND DIRECTION (DEGREES)	195.	194.	194.	198.	195.	254.	229.	253.	278.	300.	277.	321.
4--TEMPERATURE (CENTIGRADE)	25.	25.	26.	26.	27.	26.	26.	24.	23.	21.	19.	19.
5--RELATIVE HUMIDITY (PERCENT)	95.	84.	81.	75.	74.	74.	68.	69.	64.	67.	77.	79.
6--OZONE (PPM)	0.034	0.040	0.044	0.052	0.056	0.042	0.045	0.039	0.021	0.011	0.004	0.008
7--NITRIC OXIDE (PPM)	0.001	0.000	0.001	0.002	0.003	0.007	0.004	0.002	0.002	0.003	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.006	0.006	0.008	0.008	0.009	0.009	0.006	0.008	0.006	0.005	0.005	0.004
9--NITROGEN OXIDES (PPM)	0.007	0.006	0.008	0.010	0.012	0.016	0.010	0.010	0.008	0.008	0.006	0.005
10--METHANE (PPMC)	1.350	1.350	1.350	1.370	1.420	1.330	1.190	1.150	1.150	1.150	1.600	1.240
11--NON-METHANE HYDROCARBON (PPMC)	0.750	0.750	0.850	0.918	0.853	0.820	0.771	0.651	0.503	0.598	0.676	0.513
12--CARBON MONOXIDE (PPM)	-0.075	0.050	0.100	0.275	0.262	0.500	0.200	0.162	0.175	0.075	0.100	0.125
19--FLUOROCARBON-11 (PPT)	166.	206.	231.	231.	220.	179.	183.	153.	130.	140.	228.	176.
20--CARBON TETRACHLORIDE (PPT)	105.	195.	260.	260.	190.	90.	135.	112.	40.	75.	574.	210.

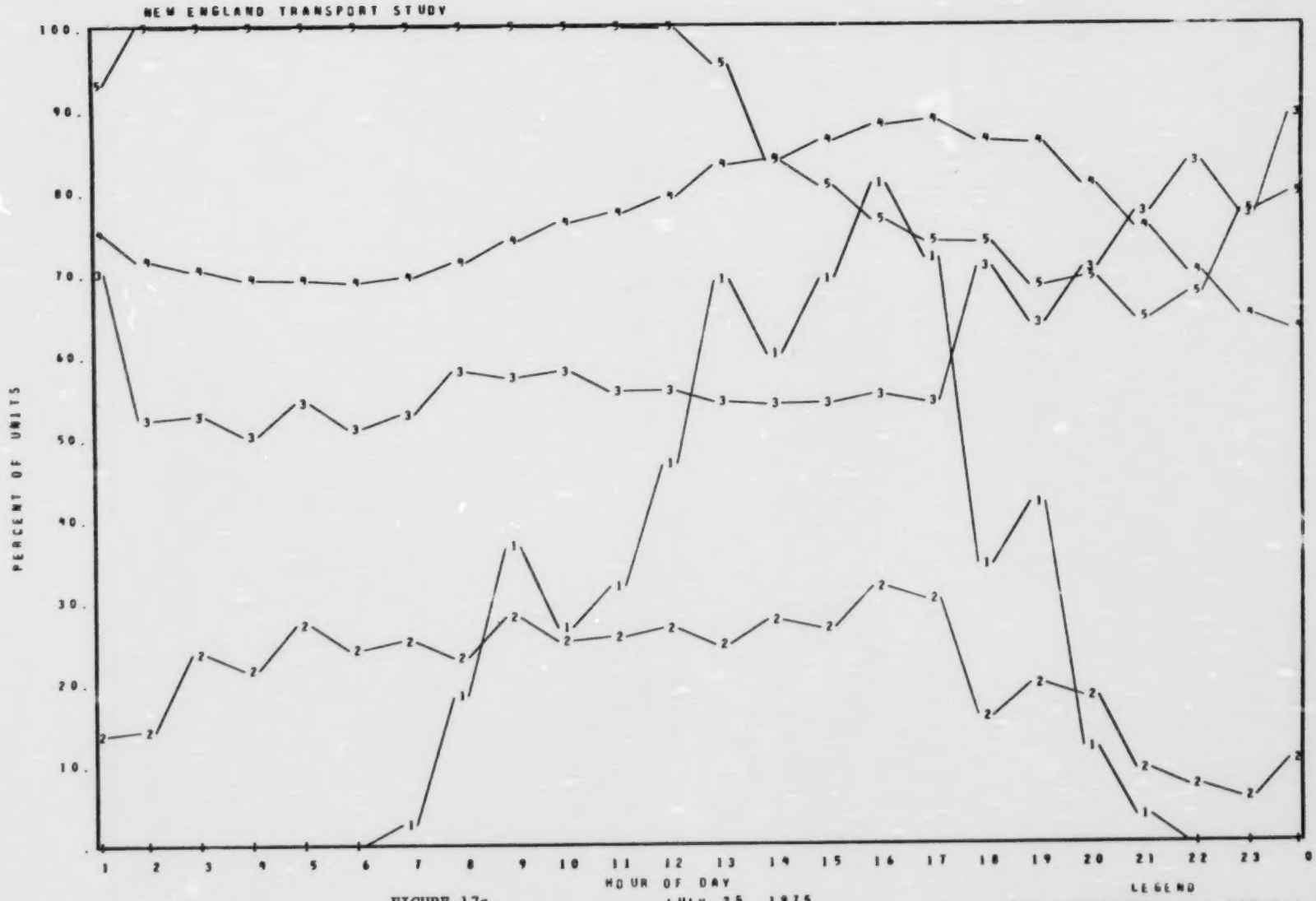

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 25, 1975
LEGEND
1--GLOBAL IRRADIANCE 3.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 17a.

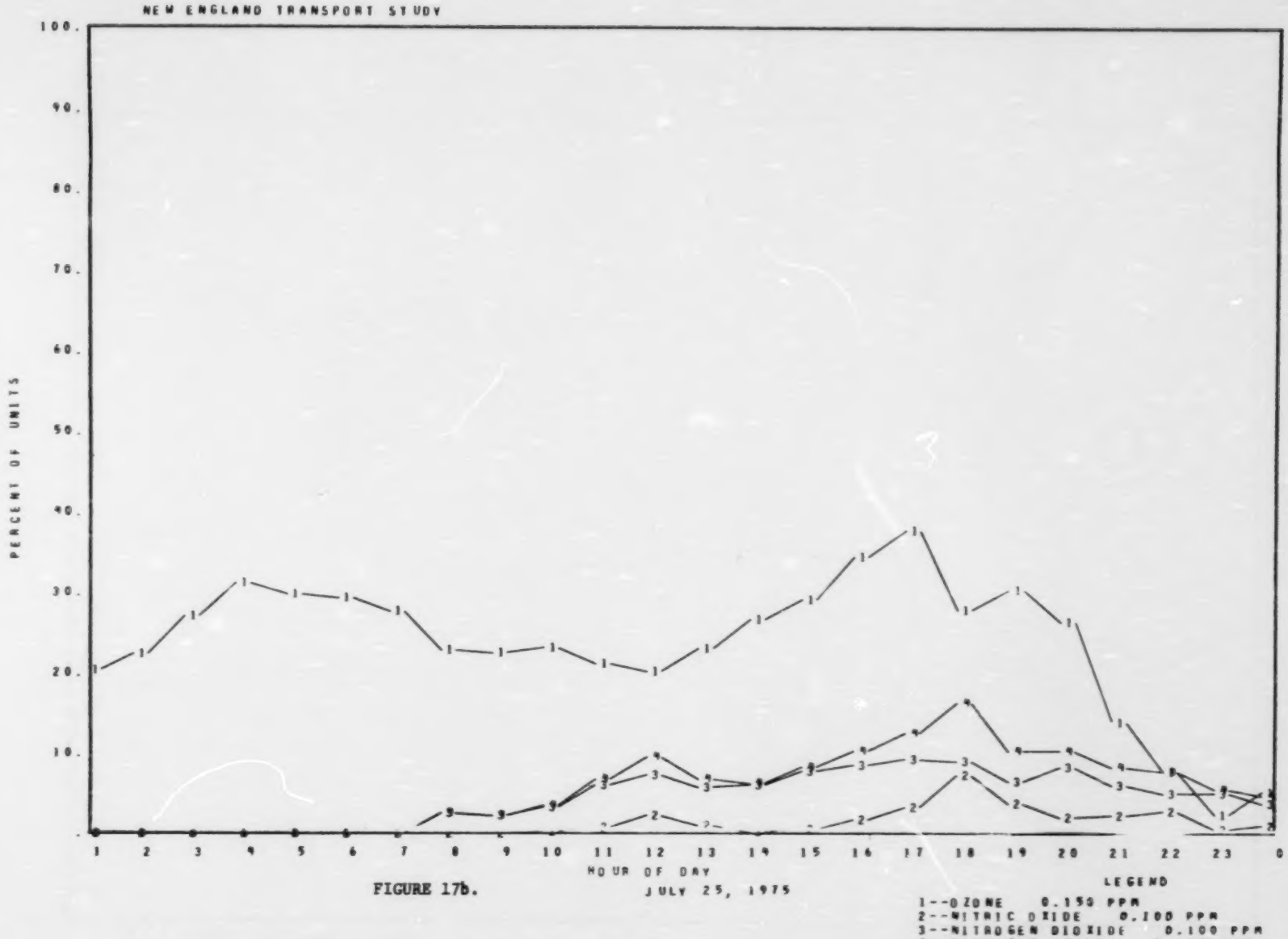
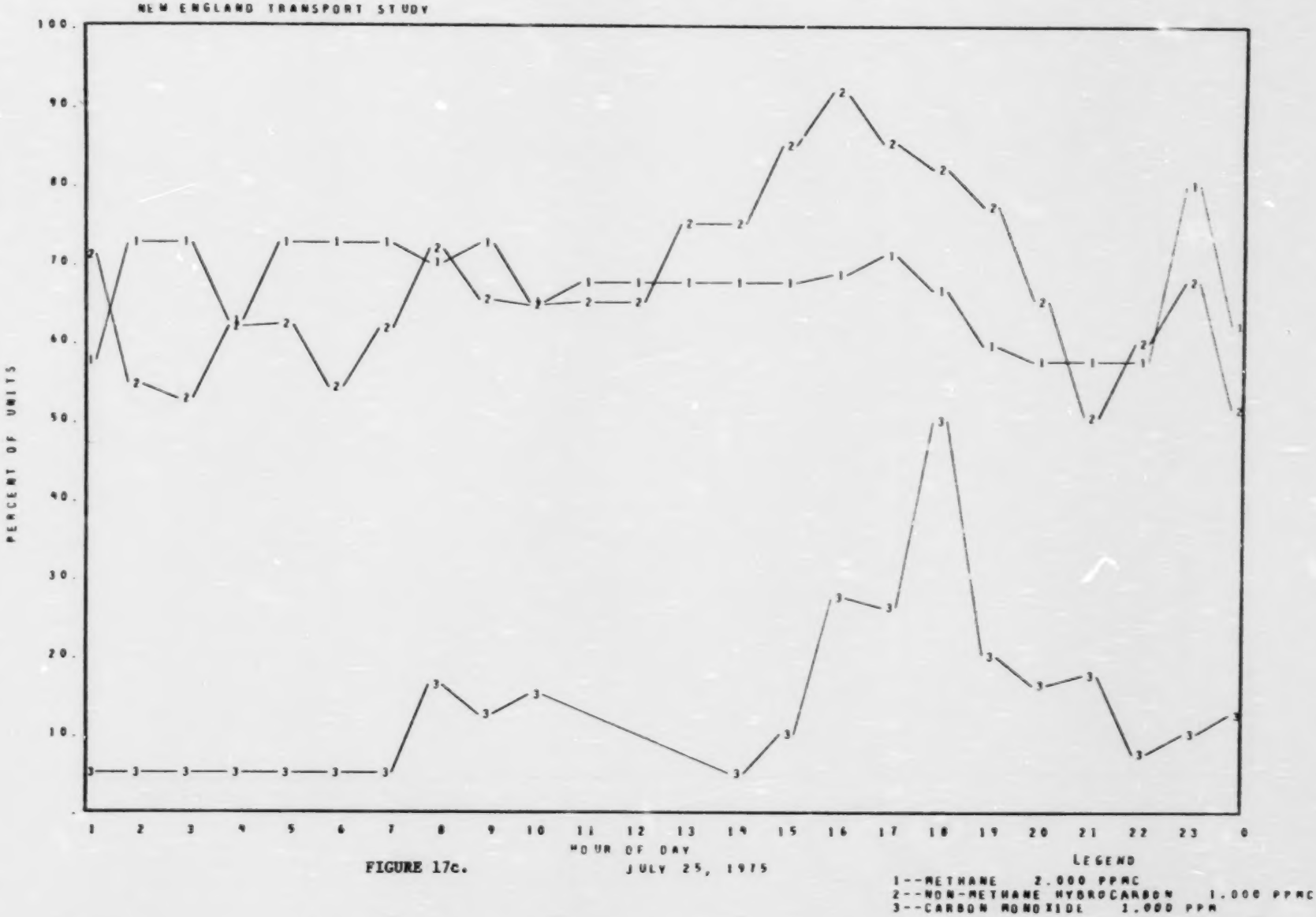

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 25, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 17b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 25, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 1.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 17c.

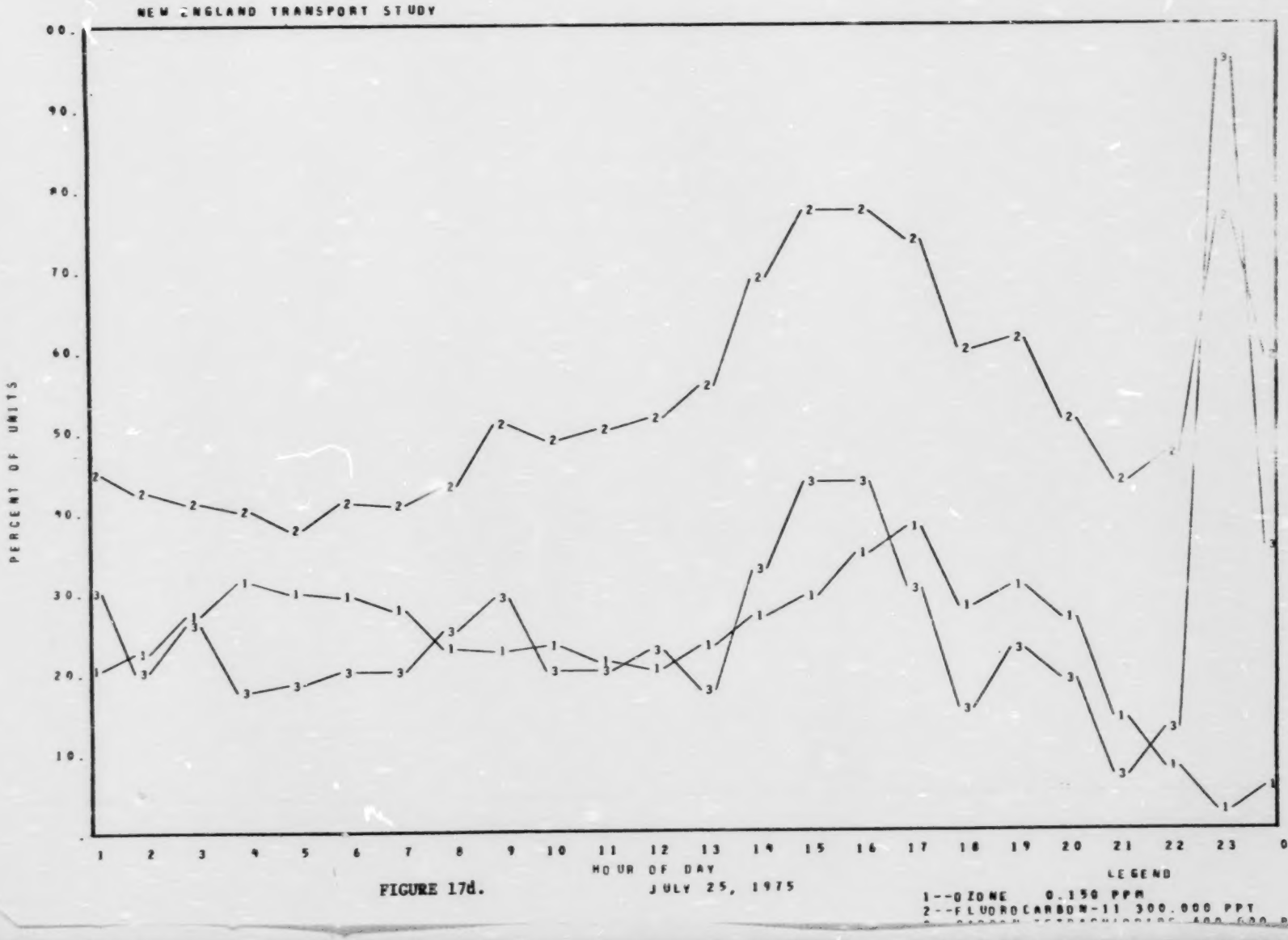
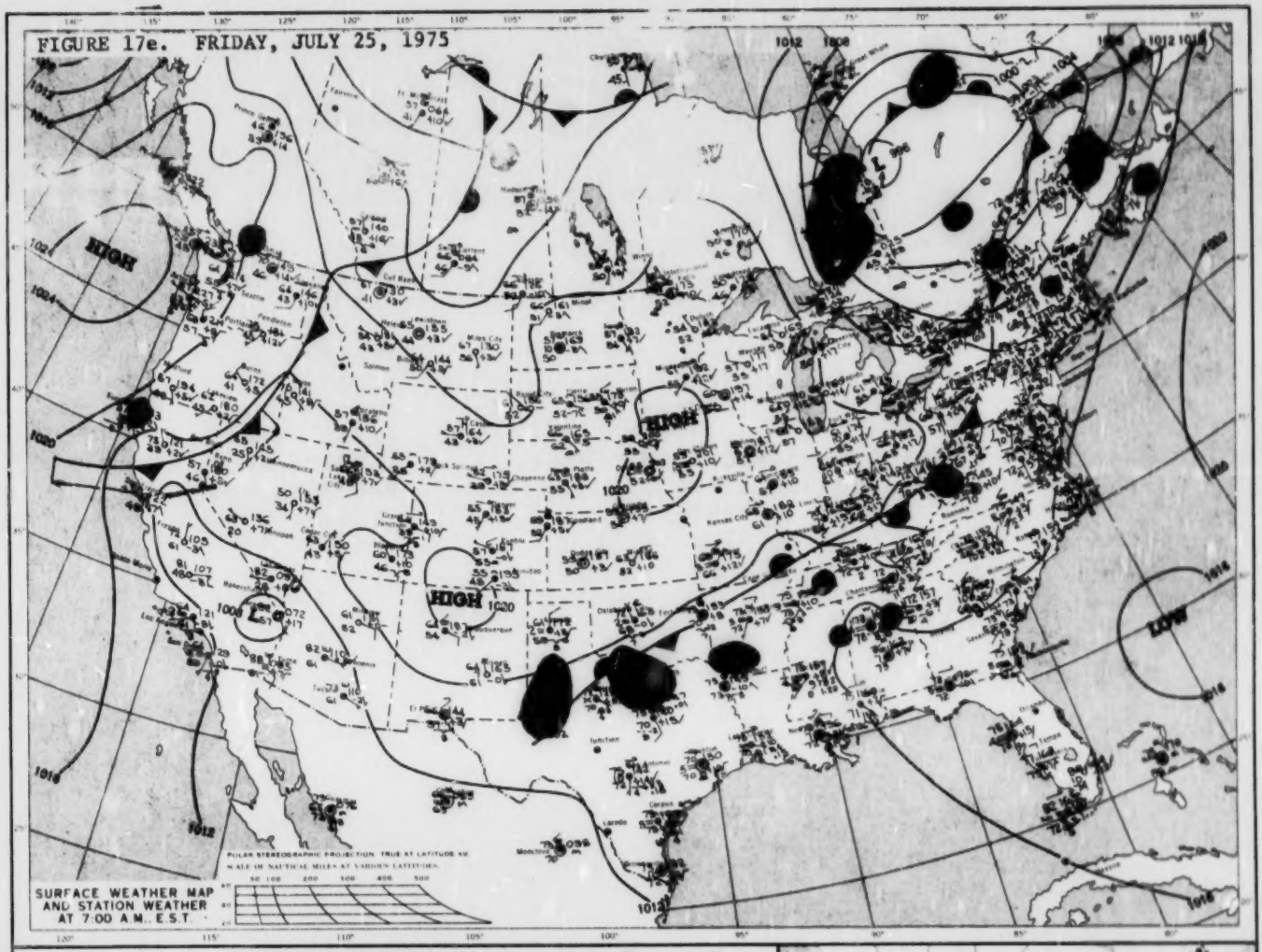

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
00.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 25, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT

FIGURE 17d.

FIGURE 17e. FRIDAY, JULY 25, 1975



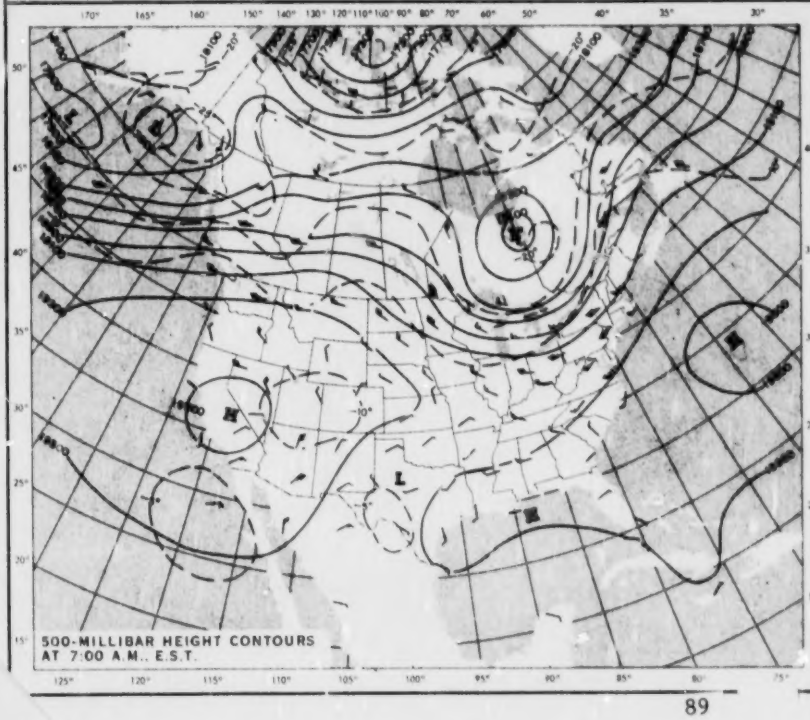


TABLE 14a. JULY 26. 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.647	24
2--WIND SPEED (MPH)	5.458	24
3--WIND DIRECTION (DEGREES)	310.957	24
4--TEMPERATURE (CENTIGRADE)	20.340	24
5--RELATIVE HUMIDITY (PERCENT)	52.538	24
6--OZONE (PPM)	0.026	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.002	24
9--NITROGEN OXIDES (PPM)	0.004	24
10--METHANE (PPMC)	1.363	24
11--NON-METHANE HYDROCARBON (PPMC)	0.397	24
12--CARBON MONOXIDE (PPM)	0.087	24
19--FLUOROCARBON-11 (PPT)	135.	24
20--CARBON TETRACHLORIDE (PPT)	147.	24

TABLE 14b.

HOUR AVERAGES FOR JULY 26, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.925	2.375	3.900	5.325	5.150	7.150
2--WIND SPEED (MPH)	7.300	5.900	5.500	6.100	2.300	1.200	1.800	2.400	5.300	10.600	8.500	9.200
3--WIND DIRECTION (DEGREES)	323.	325.	324.	319.	327.	228.	333.	355.	298.	322.	316.	323.
4--TEMPERATURE (CENTIGRADE)	19.	18.	18.	17.	15.	14.	17.	20.	21.	22.	22.	24.
5--RELATIVE HUMIDITY (PERCENT)	70.	62.	59.	59.	66.	73.	71.	57.	47.	43.	41.	37.
6--OZONE (PPM)	0.026	0.030	0.027	0.024	0.018	0.011	0.003	0.004	0.013	0.022	0.019	0.022
7--NITRIC OXIDE (PPM)	0.000	.000	.000	.000	.000	0.000	.000	0.000	0.001	0.002	0.003	0.003
8--NITROGEN DIOXIDE (PPM)	0.002	0.000	.000	.000	.000	0.000	0.001	.000	0.002	.000	.000	0.003
9--NITROGEN OXIDES (PPM)	0.002	0.000	.000	.000	.000	0.001	0.001	0.000	0.003	0.002	0.003	0.005
10--METHANE (PPMC)	1.208	1.205	1.183	1.196	1.189	1.715	1.635	1.396	1.273	1.271	1.228	1.208
11--NON-METHANE HYDROCARBON (PPMC)	0.330	0.298	0.312	0.300	0.357	0.358	0.420	0.258	0.325	0.322	0.372	0.419
12--CARBON MONOXIDE (PPM)	0.062	0.050	0.063	0.050	0.050	0.050	0.175	0.062	0.067	0.075	0.112	0.050
19--FLUOROCARBON-11 (PPT)	174.	167.	156.	145.	150.	195.	168.	142.	142.	108.	107.	107.
20--CARBON TETRACHLORIDE (PPT)	210.	225.	225.	210.	180.	210.	202.	277.	277.	190.	120.	60.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.375	7.225	6.825	6.175	5.150	3.750	1.750	0.375	0.050	.000	.000	.000
2--WIND SPEED (MPH)	8.000	9.300	8.200	7.400	6.500	7.700	7.600	4.100	1.700	1.500	1.700	1.200
3--WIND DIRECTION (DEGREES)	340.	341.	325.	313.	312.	310.	315.	315.	267.	303.	248.	281.
4--TEMPERATURE (CENTIGRADE)	24.	25.	26.	26.	27.	27.	24.	22.	18.	15.	14.	13.
5--RELATIVE HUMIDITY (PERCENT)	34.	32.	30.	28.	27.	28.	31.	39.	61.	84.	89.	93.
6--OZONE (PPM)	0.033	0.041	0.045	0.046	0.048	0.053	0.055	0.045	0.023	0.004	.000	.000
7--NITRIC OXIDE (PPM)	0.002	0.001	0.002	0.001	0.002	0.001	0.002	0.002	0.003	0.005	0.011	0.012
8--NITROGEN DIOXIDE (PPM)	.000	0.002	.000	0.001	.000	0.001	0.001	0.002	0.006	0.010	0.012	0.008
9--NITROGEN OXIDES (PPM)	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.004	0.009	0.015	0.023	0.019
10--METHANE (PPMC)	1.188	1.188	1.190	1.136	1.178	1.156	1.188	1.211	1.798	1.749	2.193	1.840
11--NON-METHANE HYDROCARBON (PPMC)	0.425	0.413	0.443	0.518	0.540	0.394	0.392	0.375	0.442	0.387	0.595	0.558
12--CARBON MONOXIDE (PPM)	0.025	0.050	0.050	0.025	0.067	.000	0.013	.000	0.050	0.188	0.275	0.475
19--FLUOROCARBON-11 (PPT)	100.	96.	97.	107.	100.	115.	124.	113.	122.	178.	139.	182.
20--CARBON TETRACHLORIDE (PPT)	55.	105.	25.	225.	75.	90.	50.	70.	120.	90.	105.	120.

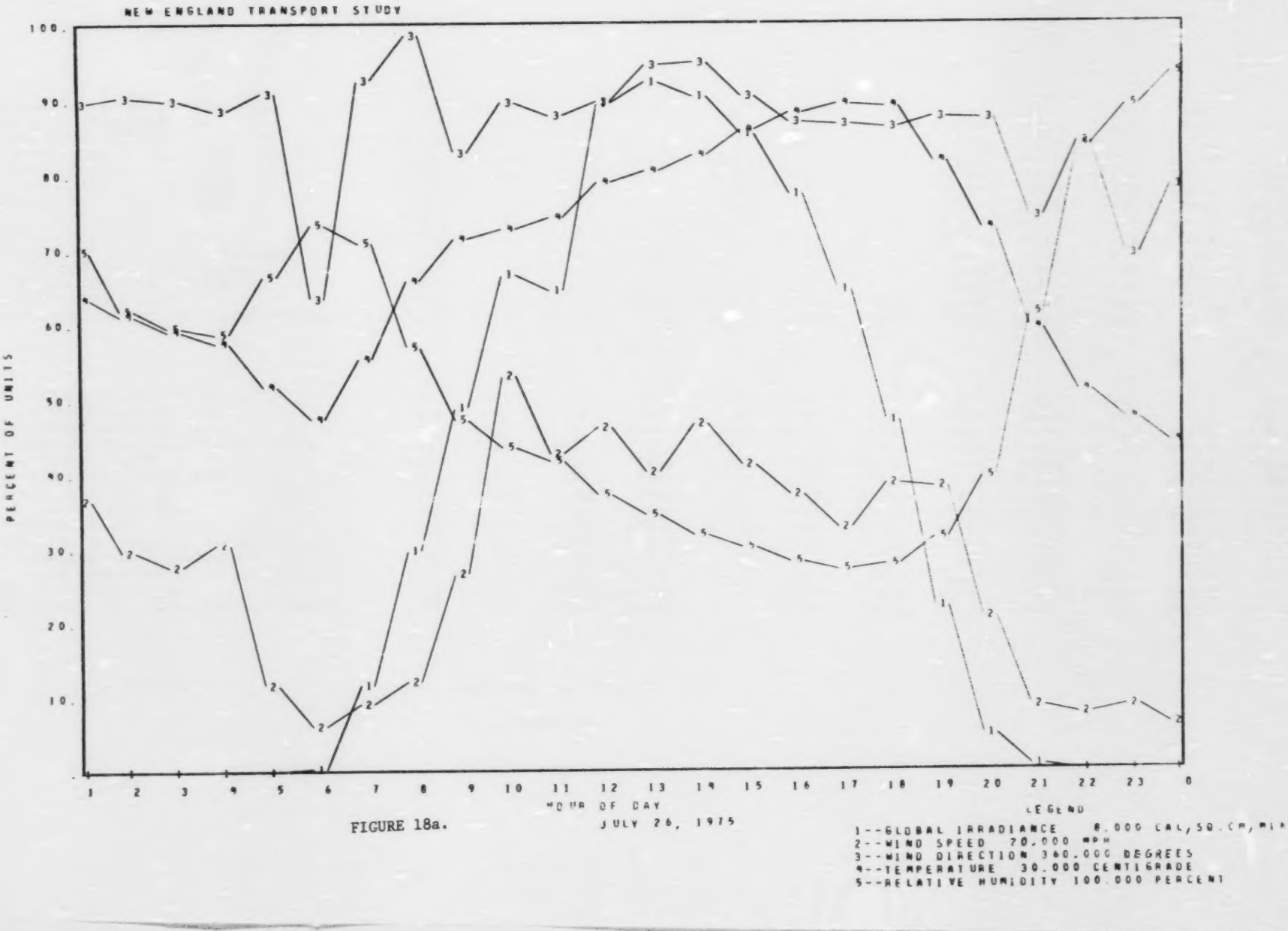

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 26, 1975
LEGEND
1--GLOBAL IRRADIANCE 0.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 18a.

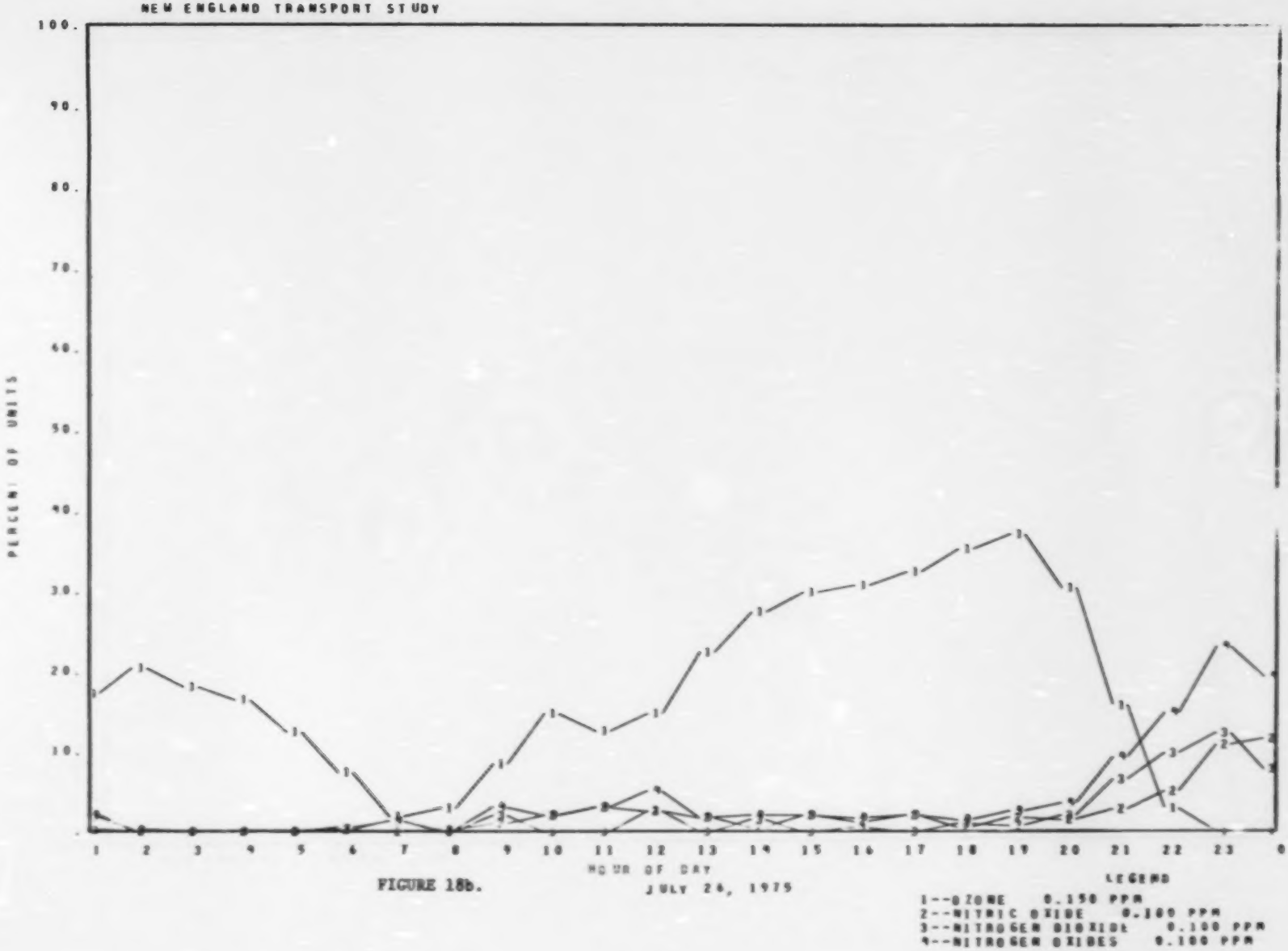

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 24, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 18b.

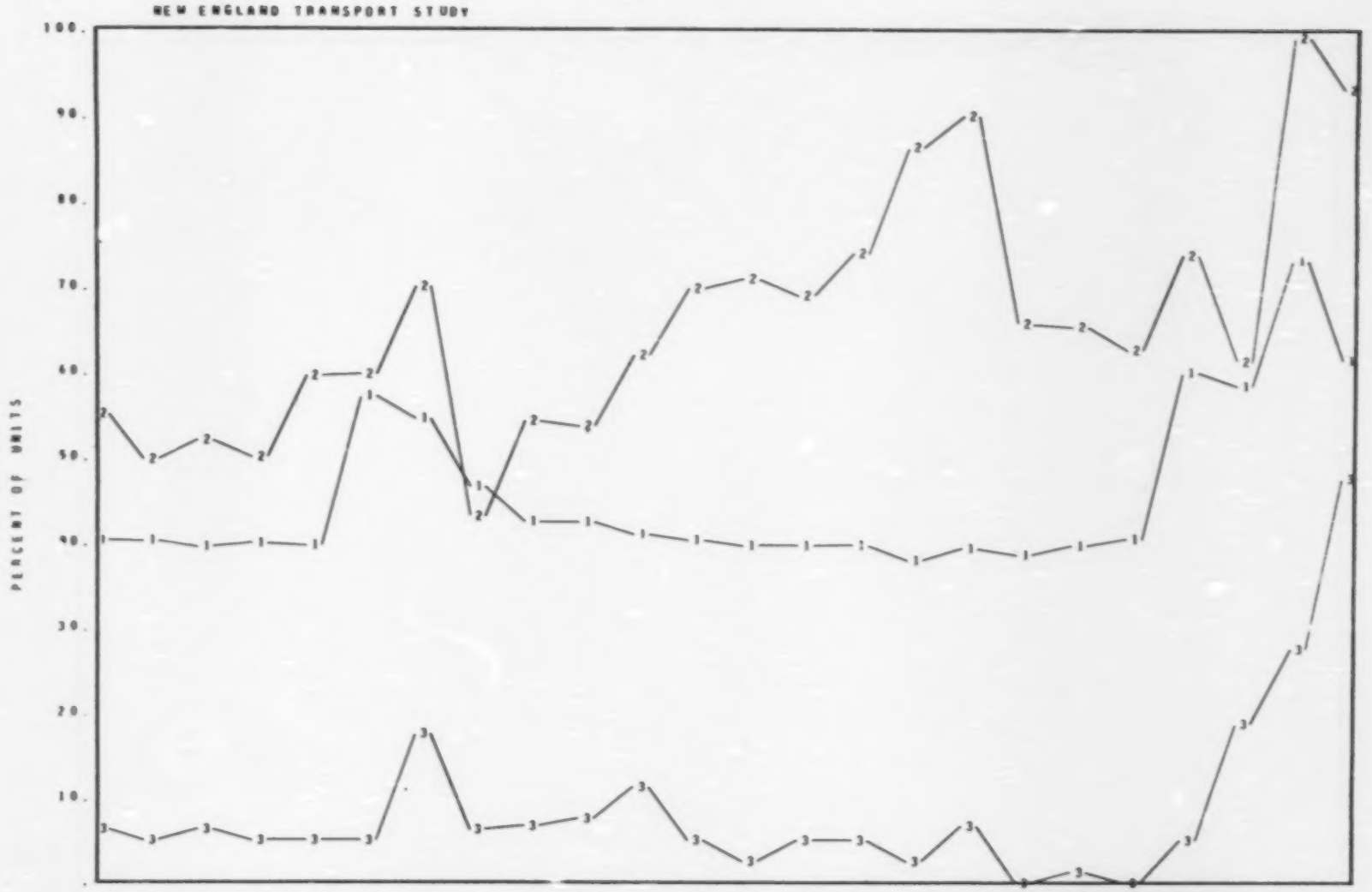

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 26, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.600 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 18c.

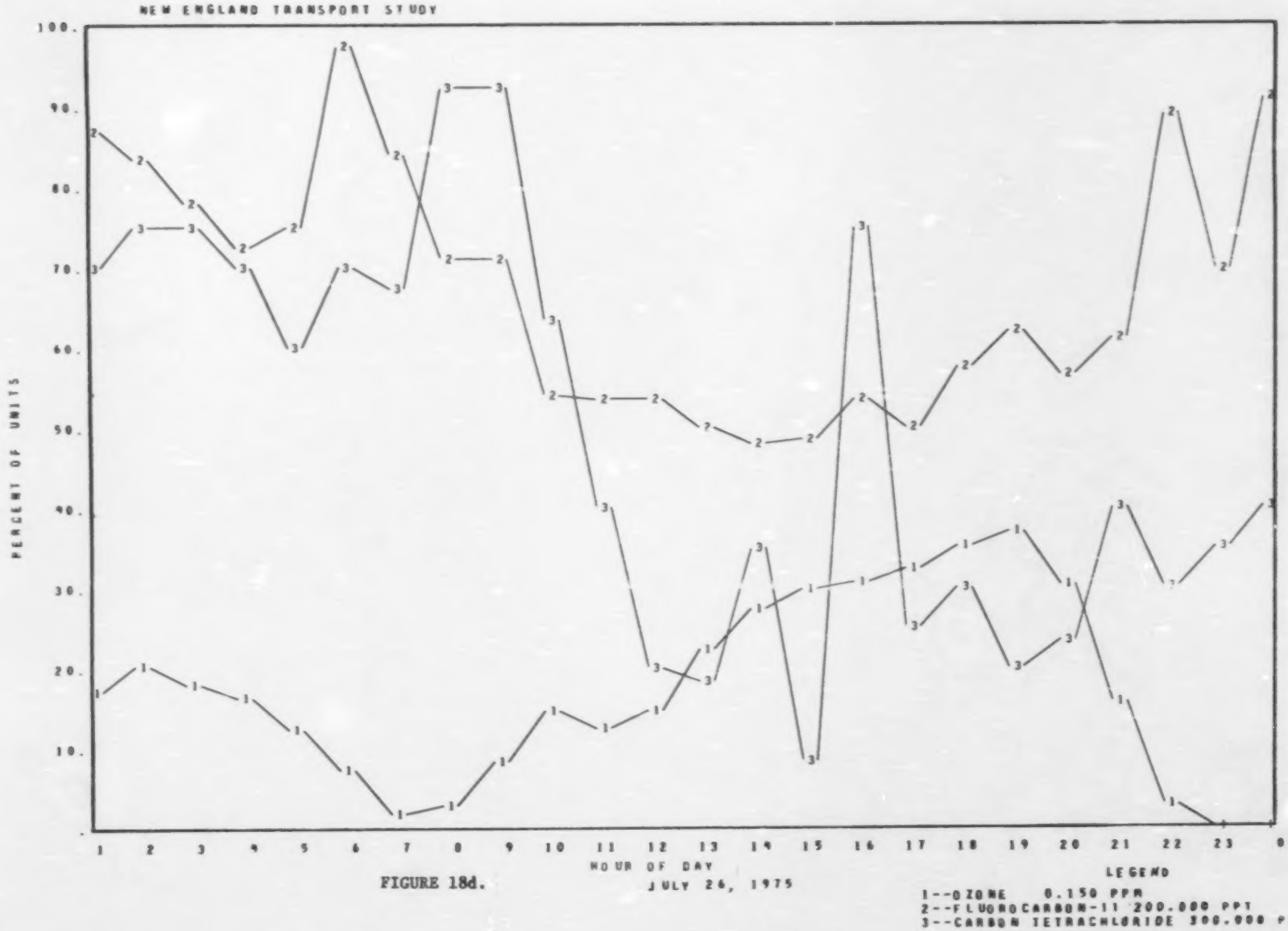
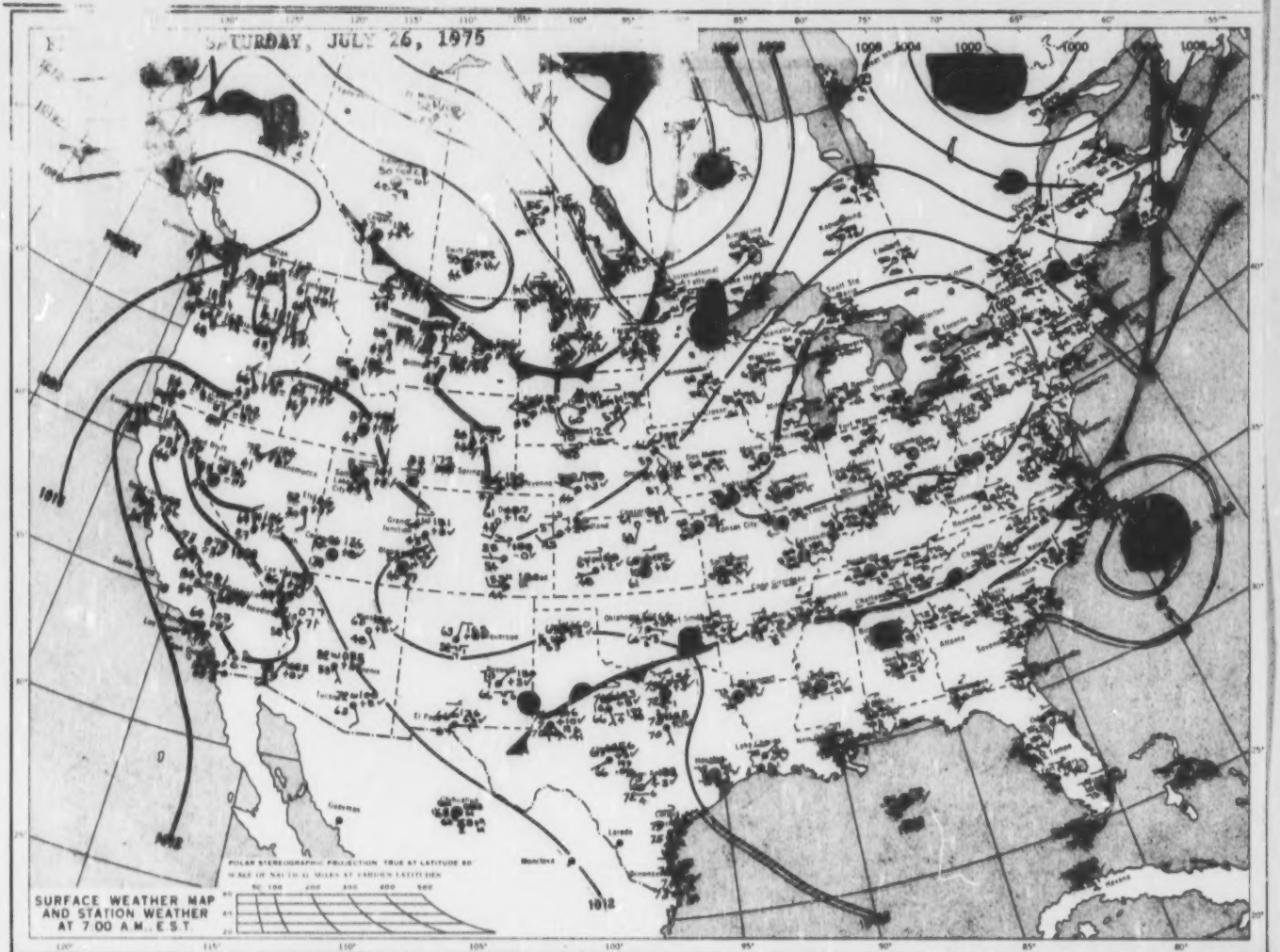
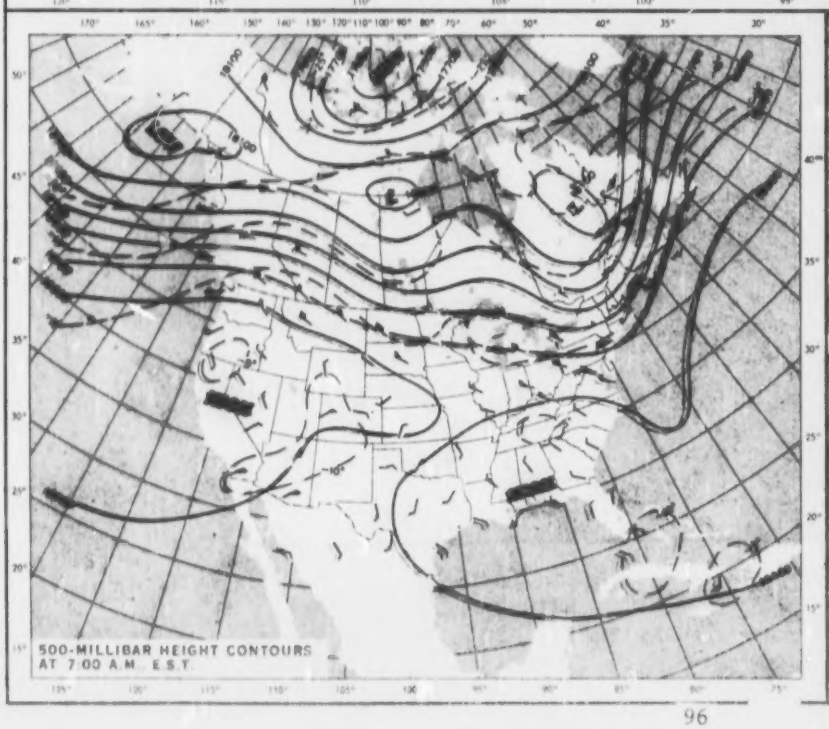

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 24, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 300.000 PPT

FIGURE 18d.


SATURDAY, JULY 26, 1975
SURFACE WEATHER MAP
AND STATION WEATHER
AT 7:00 A.M. E.S.T.


500-MILLIBAR HEIGHT CONTOURS
AT 7:00 A.M. E.S.T.

HIGHEST AND LOWEST TEMPERATURES

PRECIPITATION AREAS AND AMOUNTS

TABLE 15a. JULY 27, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MI	2.645	24
2--WIND SPEED (MPH)	2.787	24
3--WIND DIRECTION (DEGREES)	237.225	24
4--TEMPERATURE (CENTIGRADE)	19.935	24
5--RELATIVE HUMIDITY (PERCENT)	61.219	24
6--OZONE (PPM)	0.037	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.424	24
11--NON-METHANE HYDROCARBON (PPMC)	0.524	24
12--CARBON MONOXIDE (PPM)	0.114	23
13--ETHANE (PPMC)	0.003	8
14--ETHYLENE (PPMC)	0.011	9
16--ACETYLENE (PPMC)	0.013	9
19--FLUOROCARBON-11 (PPT)	139.	24
20--CARBON TETRACHLORIDE (PPT)	98.	24

TABLE 15b.

SUBSTANCE — HOUR AVERAGES FOR JULY 27, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.900	2.375	3.875	5.150	6.175	6.875
2--WIND SPEED (MPH)	1.400	0.900	0.800	1.400	1.300	0.800	1.000	1.800	1.700	1.900	3.000	5.100
3--WIND DIRECTION (DEGREES)	335.	325.	305.	336.	320.	309.	164.	341.	357.	210.	156.	194.
4--TEMPERATURE (CENTIGRADE)	13.	12.	11.	11.	10.	10.	13.	16.	19.	22.	25.	25.
5--RELATIVE HUMIDITY (PERCENT)	95.	98.	100.	100.	100.	100.	86.	70.	61.	46.	40.	34.
6--OZONE (PPM)	.000	.000	.000	.000	.000	.000	.000	0.005	0.010	0.030	0.038	0.050
7--NITRIC OXIDE (PPM)	0.010	0.005	0.003	0.001	0.000	0.000	0.000	0.001	0.002	0.000	0.000	.000
8--NITROGEN DIOXIDE (PPM)	0.008	0.004	0.004	0.002	0.002	0.002	0.001	0.001	0.003	0.003	0.002	0.001
9--NITROGEN OXIDES (PPM)	0.018	0.009	0.007	0.003	0.002	0.002	0.001	0.001	0.004	0.003	0.003	0.001
10--METHANE (PPMC)	1.650	1.190	1.190	1.190	1.190	1.200	2.550	1.550	1.280	1.190	1.150	1.150
11--NON-METHANE HYDROCARBON (PPMC)	0.488	0.573	0.471	0.484	0.375	0.363	0.609	0.416	0.405	0.400	0.466	0.485
12--CARBON MONOXIDE (PPM)	0.325	0.212	0.225	0.162	0.100	0.062	0.100	0.087	0.075	0.075	0.062	-0.031
13--ETHANE (PPMC)	0.005	-0.005	0.005	0.003	0.004	-0.004	-0.005	-0.005	-0.005	-0.006	0.006	-0.006
14--ETHYLENE (PPMC)	0.014	-0.012	0.010	0.004	0.004	-0.008	-0.013	-0.017	-0.022	-0.026	0.031	0.013
16--ACETYLENE (PPMC)	0.014	-0.011	0.009	0.006	0.007	-0.015	-0.024	-0.032	-0.041	-0.049	0.058	0.011
19--FLUOROCARBON-11 (PPT)	157.	135.	150.	139.	121.	126.	203.	118.	118.	110.	118.	106.
20--CARBON TETRACHLORIDE (PPT)	105.	90.	100.	90.	105.	100.	135.	75.	60.	115.	100.	65.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.250	7.200	6.825	6.150	5.100	3.600	1.525	0.375	0.075	.000	.000	.000
2--WIND SPEED (MPH)	4.500	4.300	4.300	4.500	5.000	5.000	6.700	4.100	1.600	2.800	1.600	2.200
3--WIND DIRECTION (DEGREES)	171.	204.	206.	185.	196.	171.	164.	189.	211.	213.	243.	190.
4--TEMPERATURE (CENTIGRADE)	27.	27.	28.	29.	29.	29.	26.	24.	20.	18.	16.	16.
5--RELATIVE HUMIDITY (PERCENT)	33.	31.	29.	29.	29.	30.	35.	42.	54.	66.	80.	83.
6--OZONE (PPM)	0.064	0.081	0.089	0.092	0.086	0.076	0.078	0.079	0.056	0.028	0.017	0.016
7--NITRIC OXIDE (PPM)	0.000	0.001	0.001	.000	.000	.000	.000	.000	.000	.000	0.001	0.000
8--NITROGEN DIOXIDE (PPM)	0.003	0.005	0.003	0.002	0.001	0.001	0.002	0.002	0.009	0.014	0.014	0.014
9--NITROGEN OXIDES (PPM)	0.004	0.006	0.003	0.002	0.001	0.001	0.002	0.002	0.009	0.014	0.015	0.015
10--METHANE (PPMC)	1.150	1.100	1.100	1.100	1.100	1.100	1.150	1.300	1.830	1.960	2.850	1.950
11--NON-METHANE HYDROCARBON (PPMC)	0.613	0.596	0.600	0.564	0.535	0.536	0.701	0.481	0.528	0.668	0.650	0.566
12--CARBON MONOXIDE (PPM)	.000	.000	.000	0.083	0.025	0.013	0.025	0.062	0.138	0.225	0.250	0.325
13--ETHANE (PPMC)	-0.005	-0.005	-0.005	-0.004	-0.004	-0.003	-0.003	-0.003	-0.002	0.002	0.001	0.002
14--ETHYLENE (PPMC)	-0.013	-0.012	-0.012	-0.011	-0.011	-0.011	-0.010	-0.010	-0.009	0.009	0.004	0.007
16--ACETYLENE (PPMC)	-0.010	-0.010	-0.009	-0.008	-0.007	-0.007	-0.006	-0.005	-0.005	0.004	0.006	0.006
19--FLUOROCARBON-11 (PPT)	116.	136.	134.	130.	124.	129.	128.	152.	184.	158.	162.	182.
20--CARBON TETRACHLORIDE (PPT)	.	135.	95.	130.	80.	105.	105.	115.	135.	105.	120.	95.

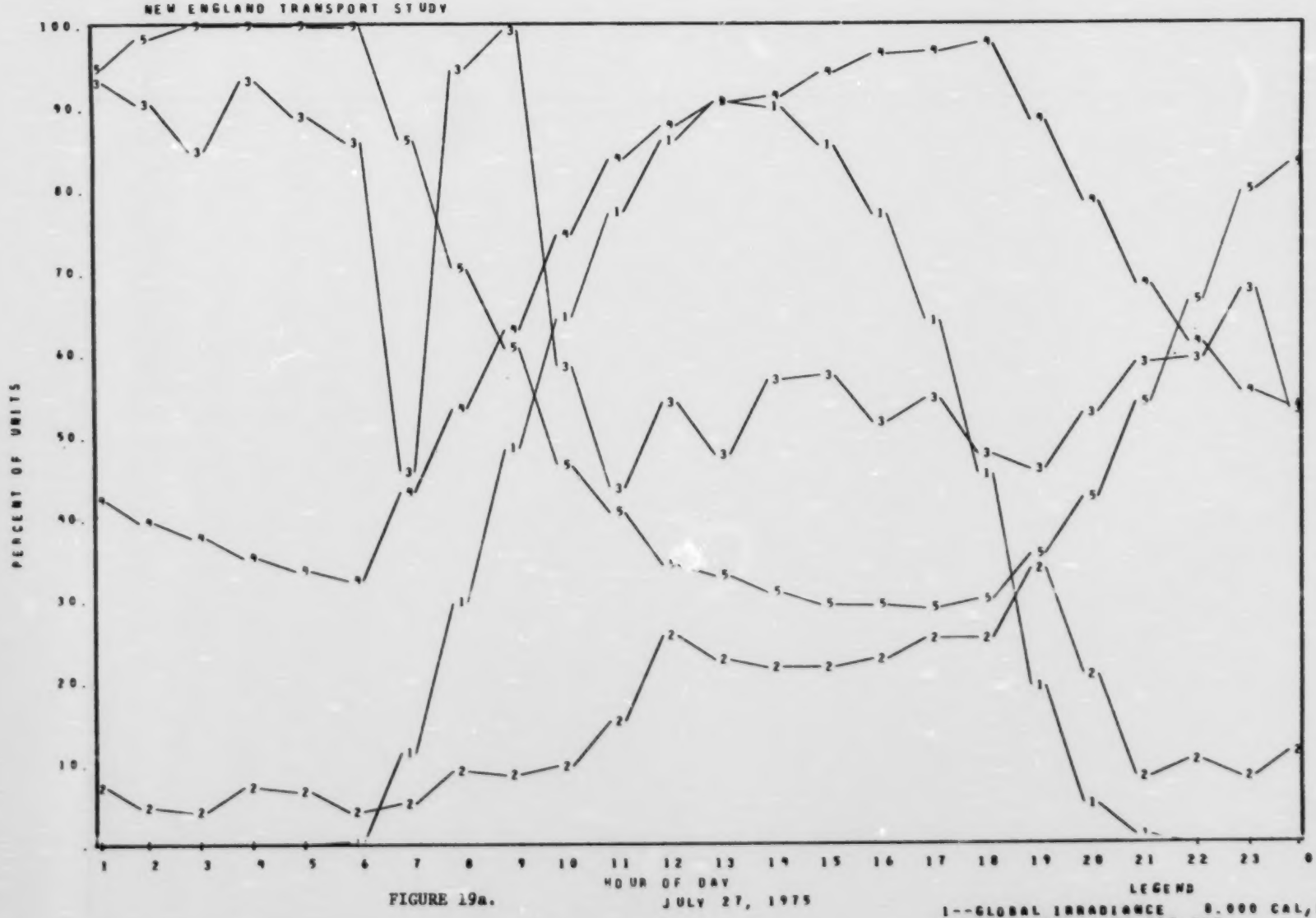

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 27, 1975
LEGEND
1--GLOBAL IRRADIANCE 0.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 19a.

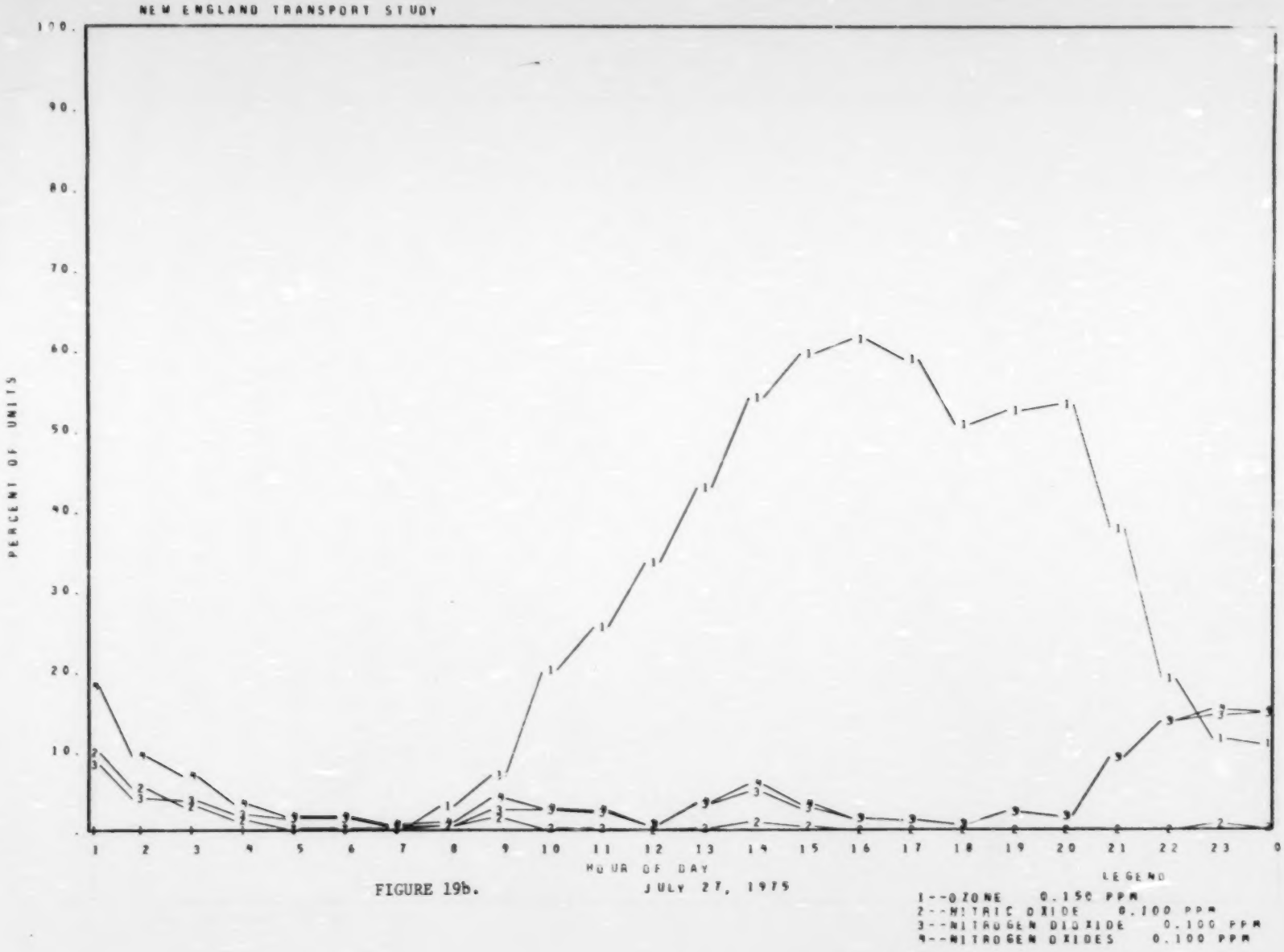

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 27, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 19b.

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 27, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.800 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 19c.

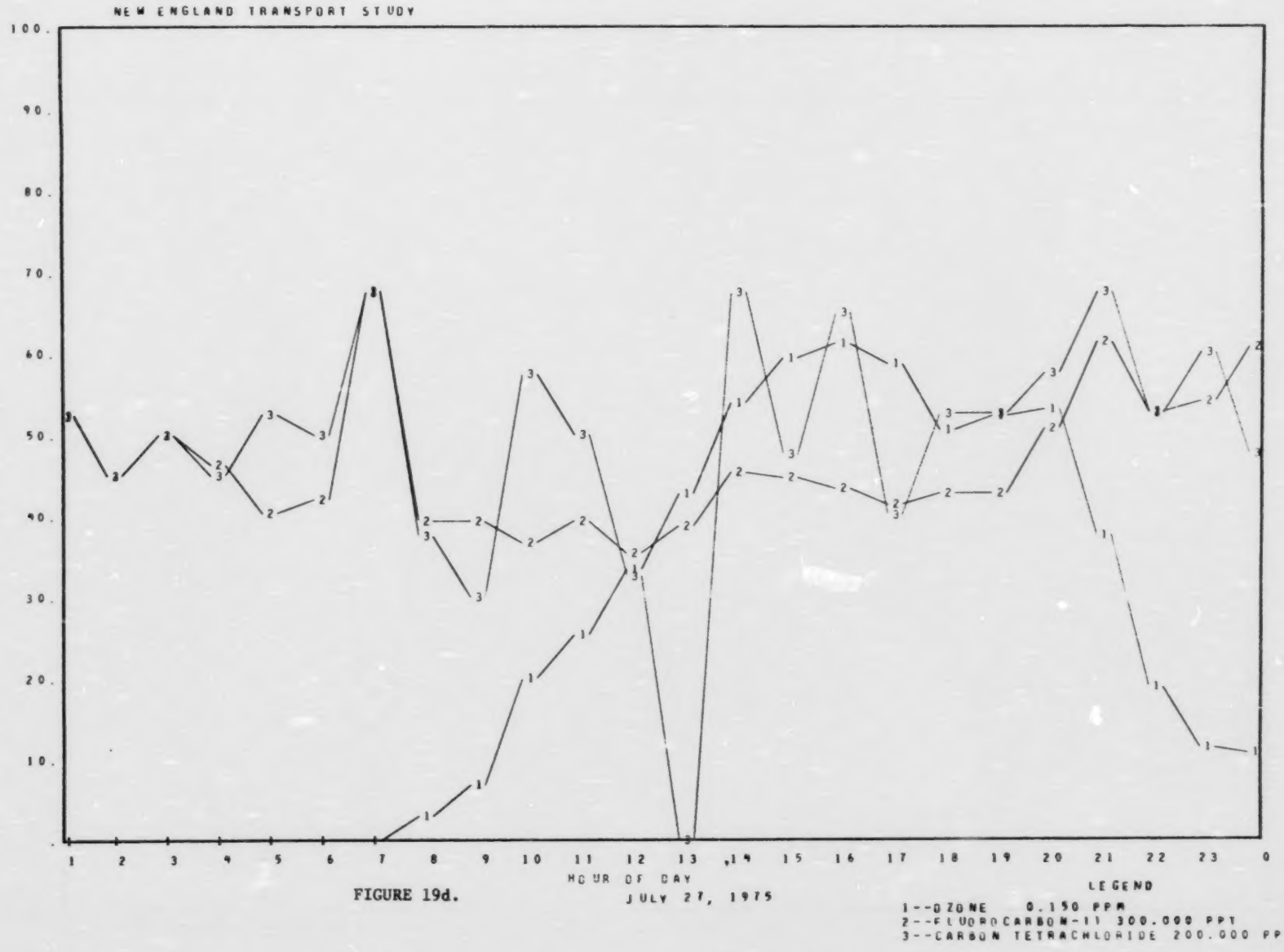
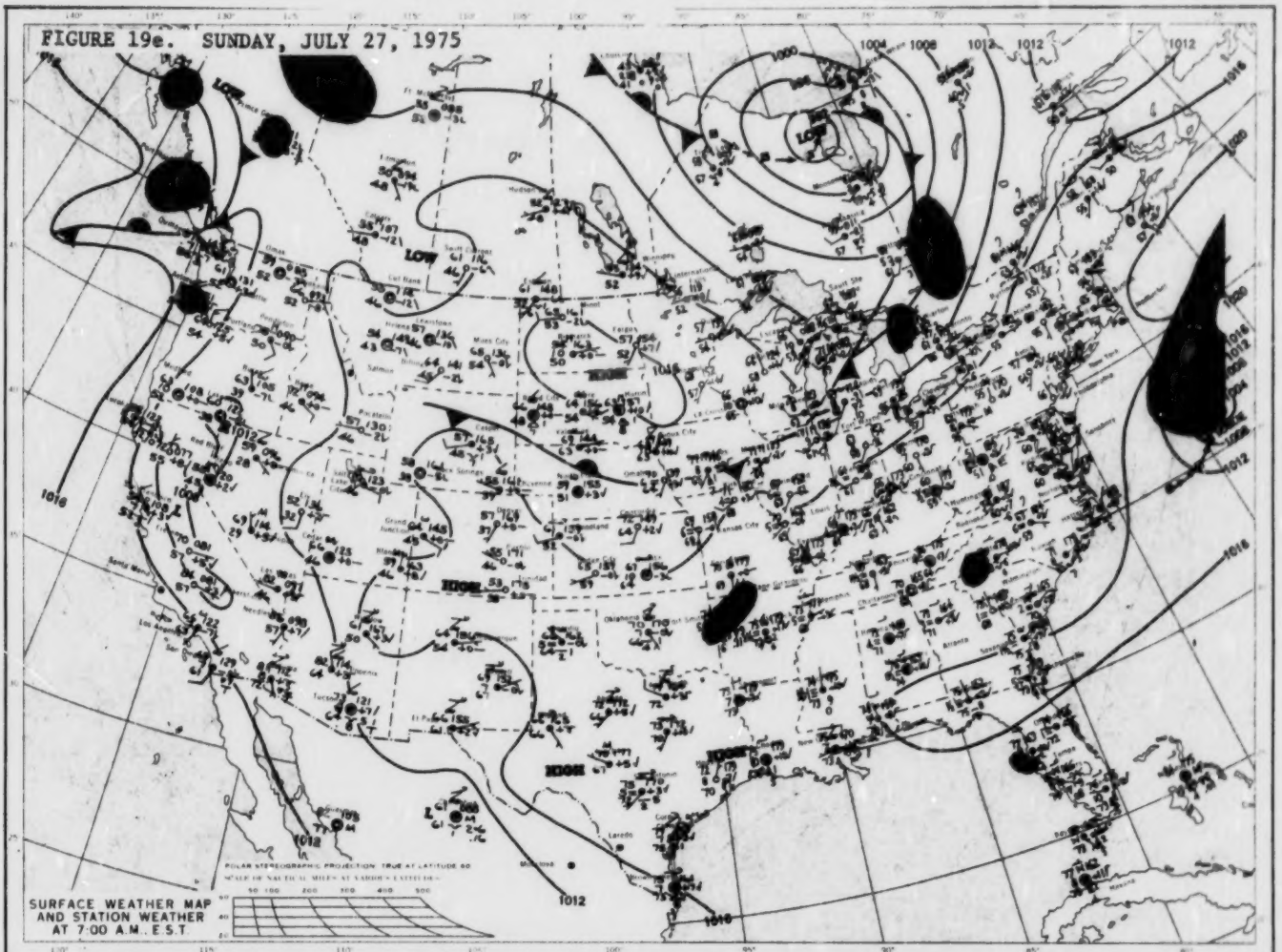

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 27, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 19d.

FIGURE 19e. SUNDAY, JULY 27, 1975



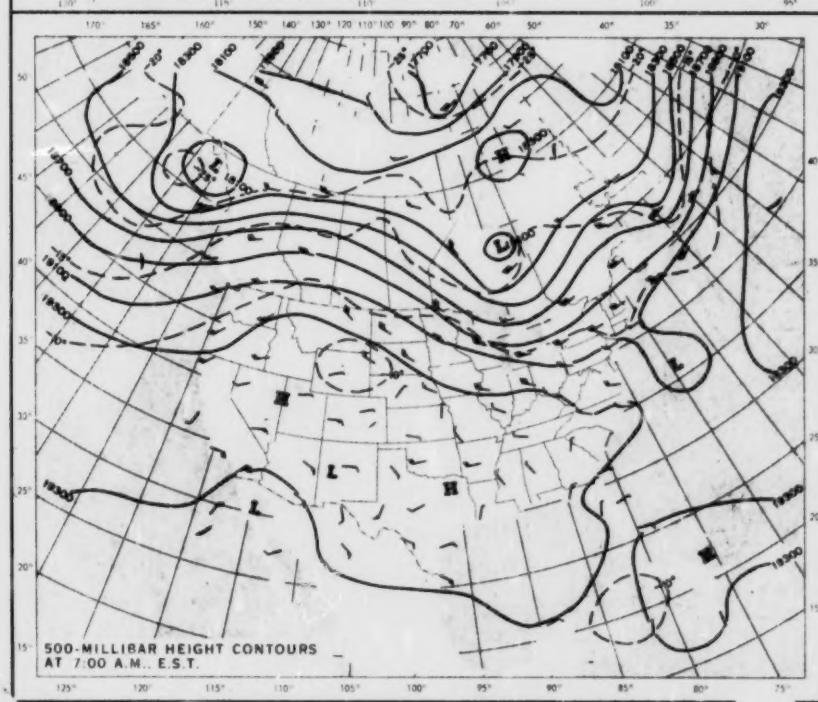


TABLE 16a. JULY 28. 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.157	24
2--WIND SPEED (MPH)	3.000	24
3--WIND DIRECTION (DEGREES)	215.100	24
4--TEMPERATURE (CENTIGRADE)	22.863	24
5--RELATIVE HUMIDITY (PERCENT)	61.863	24
6--OZONE (PPM)	0.023	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.009	24
9--NITROGEN OXIDES (PPM)	0.012	24
10--METHANE (PPMC)	1.770	24
11--NON-METHANE HYDROCARBON (PPMC)	0.363	24
12--CARBON MONOXIDE (PPM)	0.284	24
13--ETHANE (PPMC)	0.003	15
14--ETHYLENE (PPMC)	0.007	15
16--ACETYLENE (PPMC)	0.007	15
19--FLUOROCARBON-11 (PPT)	158.	24
20--CARBON TETRACHLORIDE (PPT)	133.	24

TABLE 16b.

SUBSTANCE	HOUR AVERAGES FOR JULY 28, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.200	0.825	1.600	4.500	5.750	6.575
2--WIND SPEED (MPH)	1.500	1.900	2.600	2.200	3.500	3.400	1.900	3.200	5.300	4.800	4.100	3.700
3--WIND DIRECTION (DEGREES)	169.	195.	191.	185.	182.	189.	151.	180.	167.	189.	226.	266.
4--TEMPERATURE (CENTIGRADE)	15.	15.	15.	16.	16.	17.	18.	19.	21.	24.	27.	29.
5--RELATIVE HUMIDITY (PERCENT)	86.	88.	90.	91.	90.	89.	88.	82.	73.	62.	50.	41.
6--OZONE (PPM)	0.009	0.006	0.002	0.000	0.002	0.002	0.010	0.014	0.020	0.038	0.064	0.062
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	0.001	0.001	0.003	0.004	0.003	0.002
8--NITROGEN DIOXIDE (PPM)	0.015	0.014	0.014	0.016	0.017	0.015	0.013	0.013	0.015	0.012	0.008	0.004
9--NITROGEN OXIDES (PPM)	0.015	0.014	0.014	0.016	0.017	0.015	0.013	0.014	0.018	0.016	0.010	0.006
10--METHANE (PPMC)	2.876	3.121	2.403	2.033	1.846	1.933	1.925	1.646	1.626	1.705	1.610	1.441
11--NON-METHANE HYDROCARBON (PPMC)	0.467	0.501	0.518	0.272	0.210	0.220	0.235	0.215	0.282	0.388	0.236	0.273
12--CARBON MONOXIDE (PPM)	0.437	0.400	0.475	0.550	0.550	0.500	0.412	0.375	0.525	0.562	0.287	0.050
13--ETHANE (PPMC)	0.003	0.001	0.001	0.002	0.002	0.003	0.004	0.003	0.003	0.011	0.003	-0.003
14--ETHYLENE (PPMC)	0.006	0.005	0.006	0.008	0.007	0.005	0.005	0.005	0.005	0.008	0.004	-0.004
16--ACETYLENE (PPMC)	0.005	0.006	0.005	0.006	0.003	0.004	0.006	0.006	0.007	0.004	0.007	-0.007
19--FLUOROCARBON-11 (PPT)	212.	204.	185.	190.	182.	186.	163.	196.	221.	184.	143.	119.
20--CARBON TETRACHLORIDE (PPT)	120.	115.	120.	160.	155.	158.	170.	300.	145.	160.	112.	60.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.350	6.425	6.650	4.350	3.875	2.975	1.275	0.350	0.075	.000	.000	.000
2--WIND SPEED (MPH)	4.000	3.900	4.400	4.300	3.300	3.100	1.800	2.250	1.550	1.400	2.000	1.900
3--WIND DIRECTION (DEGREES)	260.	253.	243.	261.	247.	265.	249.	232.	261.	190.	173.	239.
4--TEMPERATURE (CENTIGRADE)	30.	31.	31.	30.	30.	30.	28.	26.	23.	20.	18.	18.
5--RELATIVE HUMIDITY (PERCENT)	35.	34.	31.	30.	33.	32.	35.	41.	50.	69.	81.	83.
6--OZONE (PPM)	0.052	0.055	0.043	0.046	0.039	0.034	0.024	0.011	0.017	0.003	.000	.000
7--NITRIC OXIDE (PPM)	0.003	0.003	0.002	0.002	0.006	0.005	0.003	0.002	0.003	0.008	0.008	0.010
8--NITROGEN DIOXIDE (PPM)	0.003	0.002	0.002	0.002	0.005	0.003	0.002	0.004	0.003	0.009	0.013	0.014
9--NITROGEN OXIDES (PPM)	0.006	0.005	0.005	0.004	0.011	0.007	0.005	0.006	0.006	0.017	0.021	0.023
10--METHANE (PPMC)	1.421	1.348	1.304	1.303	1.286	1.281	1.275	1.283	1.294	2.308	2.464	1.753
11--NON-METHANE HYDROCARBON (PPMC)	0.440	0.398	0.415	0.392	0.448	0.345	0.245	0.343	0.233	0.596	0.473	0.553
12--CARBON MONOXIDE (PPM)	0.017	0.137	0.025	0.025	0.187	0.062	0.087	0.050	0.087	0.237	0.325	0.550
13--ETHANE (PPMC)	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	0.003	0.003	0.004	0.005
14--ETHYLENE (PPMC)	-0.005	-0.005	-0.006	-0.006	-0.006	-0.007	-0.007	-0.008	0.008	0.008	0.008	0.010
16--ACETYLENE (PPMC)	-0.007	-0.008	-0.008	-0.008	-0.008	-0.008	-0.009	-0.009	0.009	0.009	0.012	0.011
19--FLUOROCARBON-11 (PPT)	111.	111.	103.	103.	103.	100.	107.	109.	115.	319.	160.	160.
20--CARBON TETRACHLORIDE (PPT)	135.	135.	90.	97.	120.	175.	65.	67.	150.	75.	135.	165.

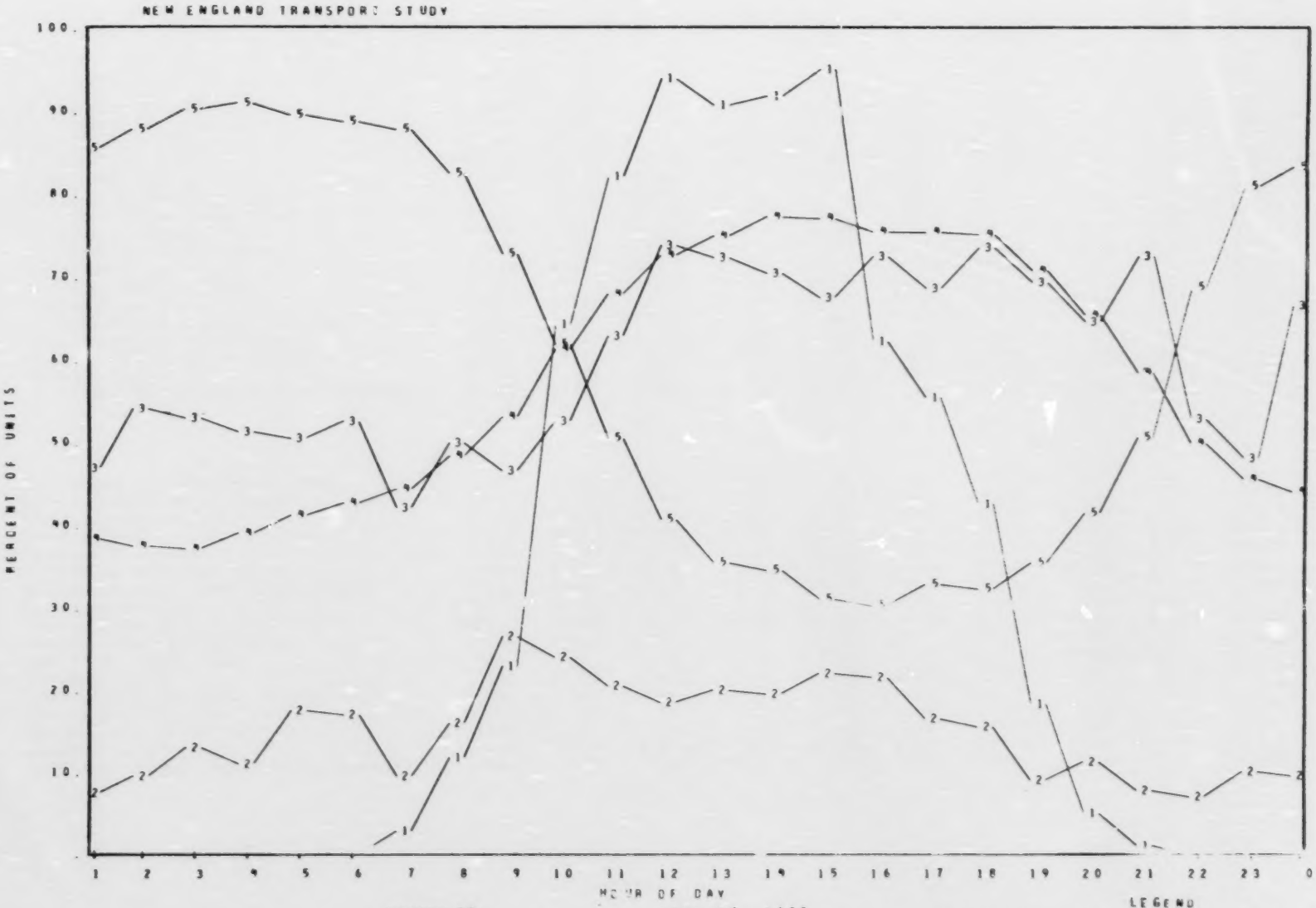

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 28, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 20a.

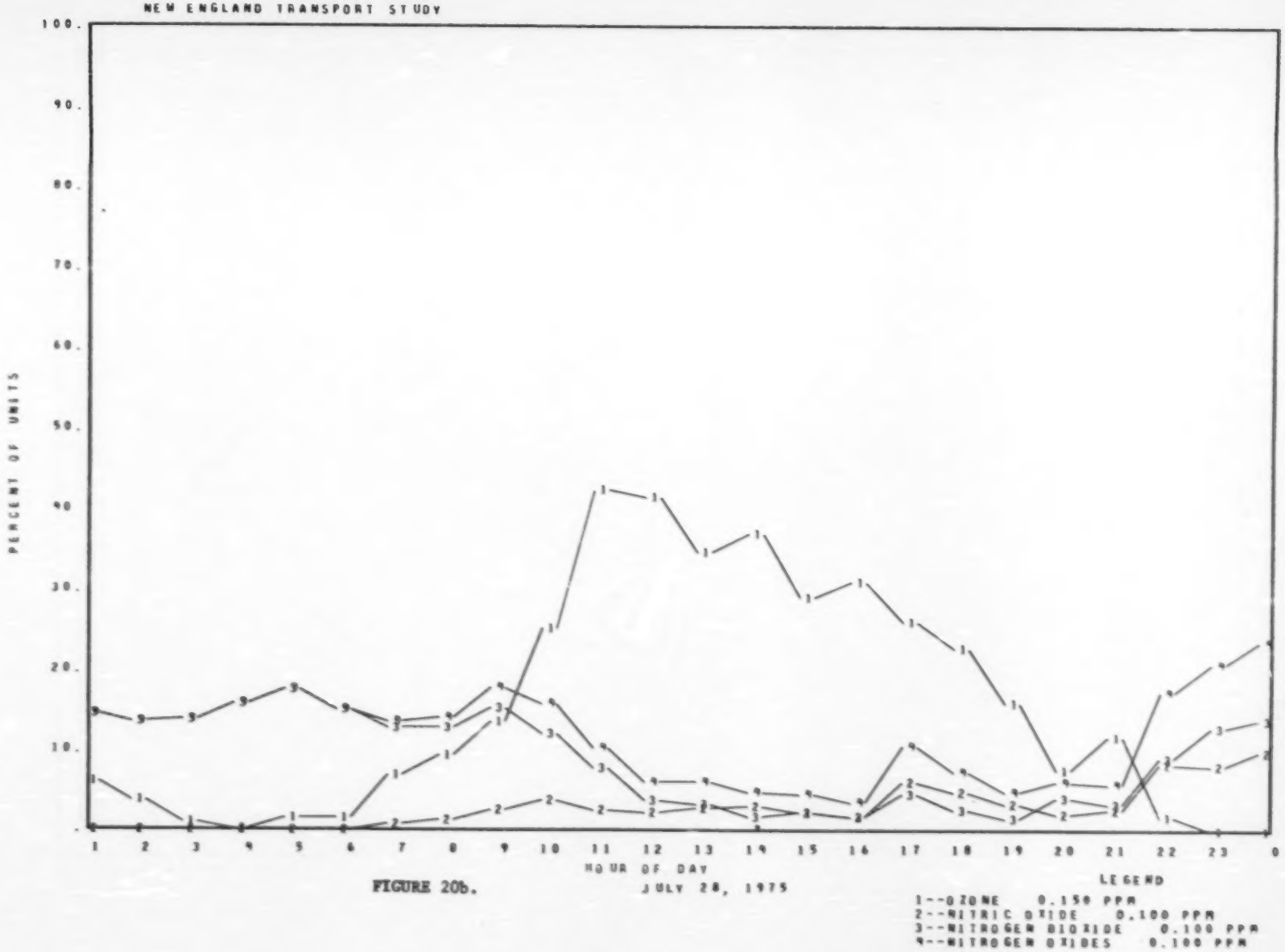

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 28, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 20b.

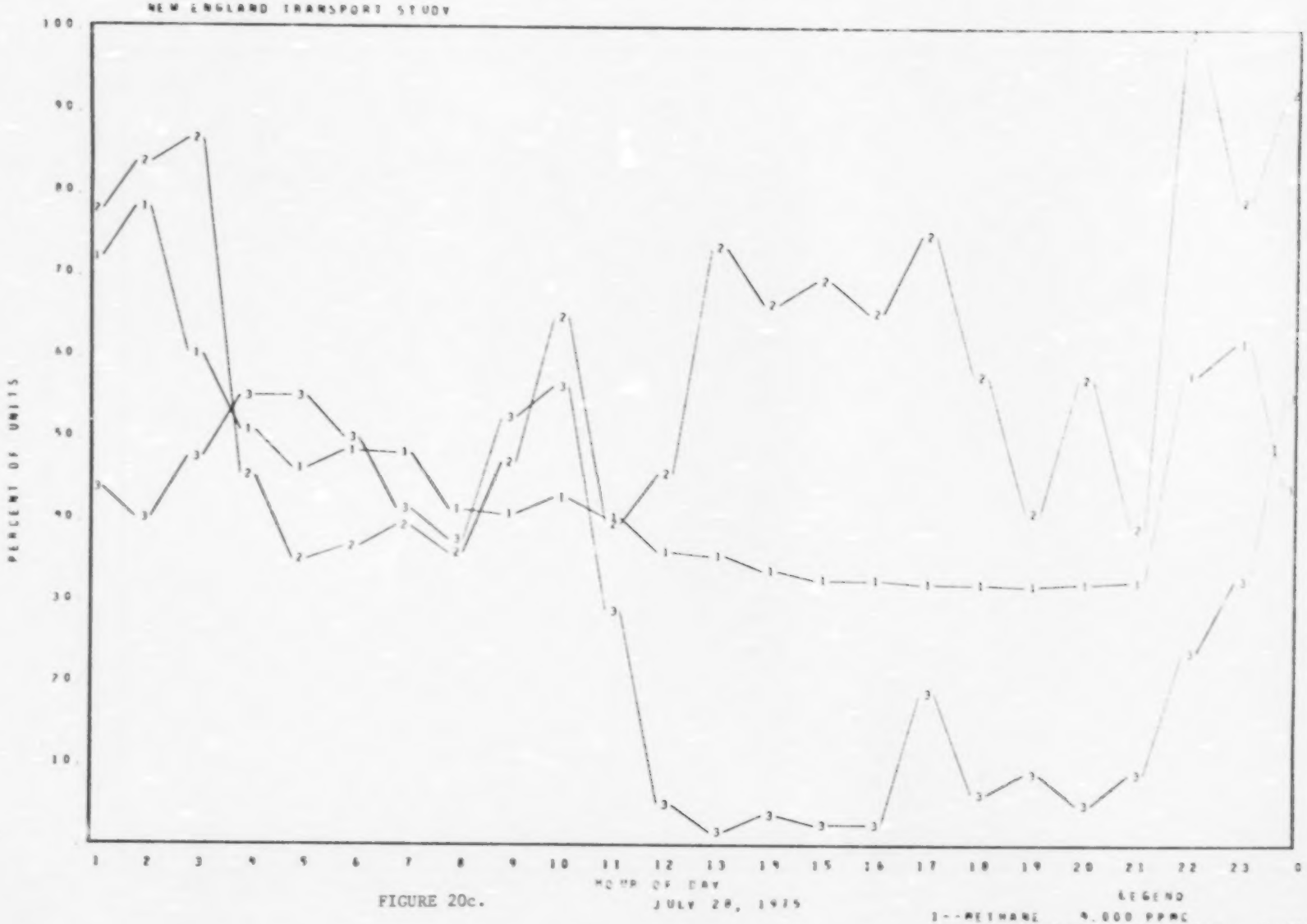

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 28, 1975
LEGEND
1--METHANE 9.000 PPMC
2--NON-METHANE HYDROCARBON 0.400 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 20c.

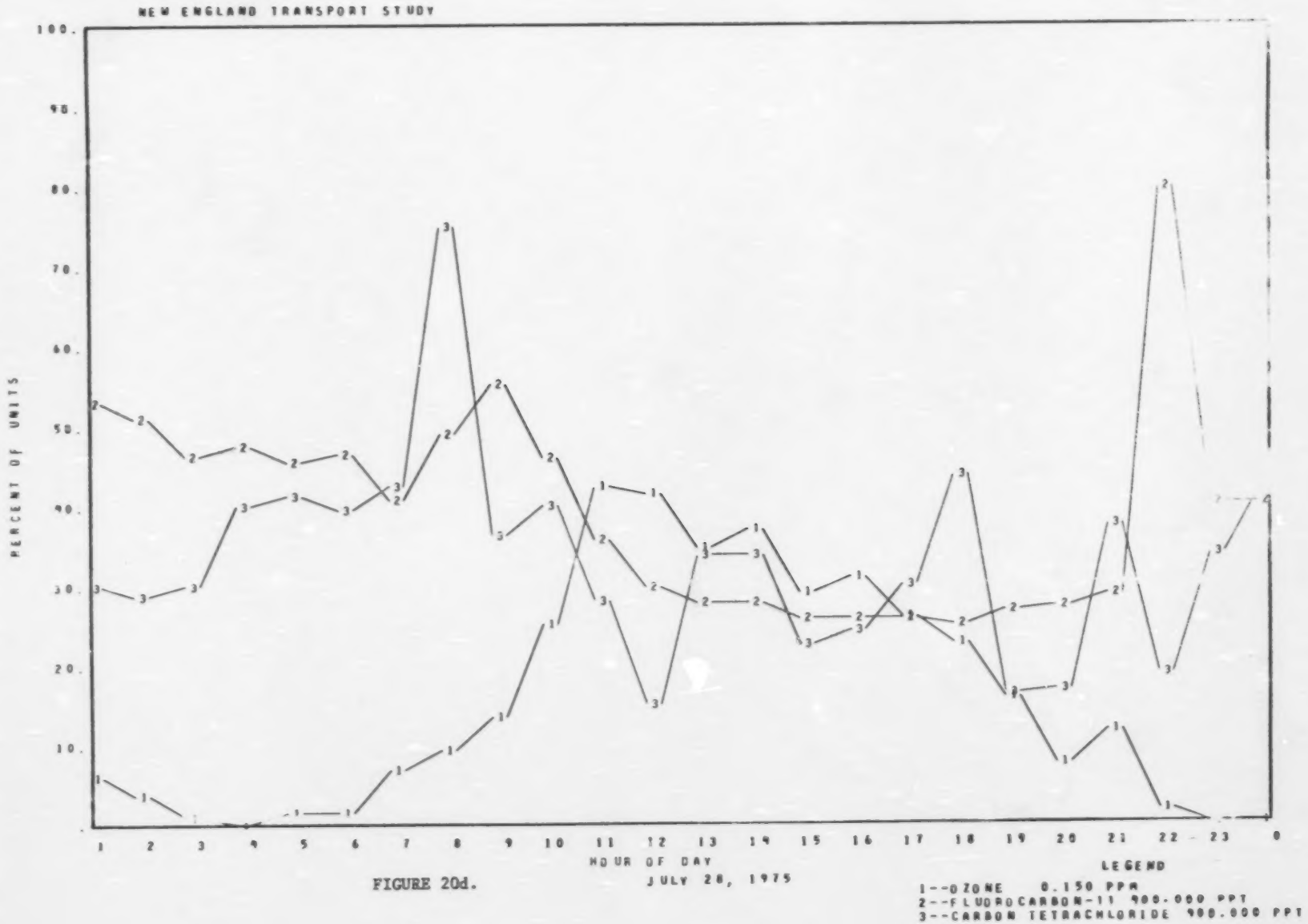
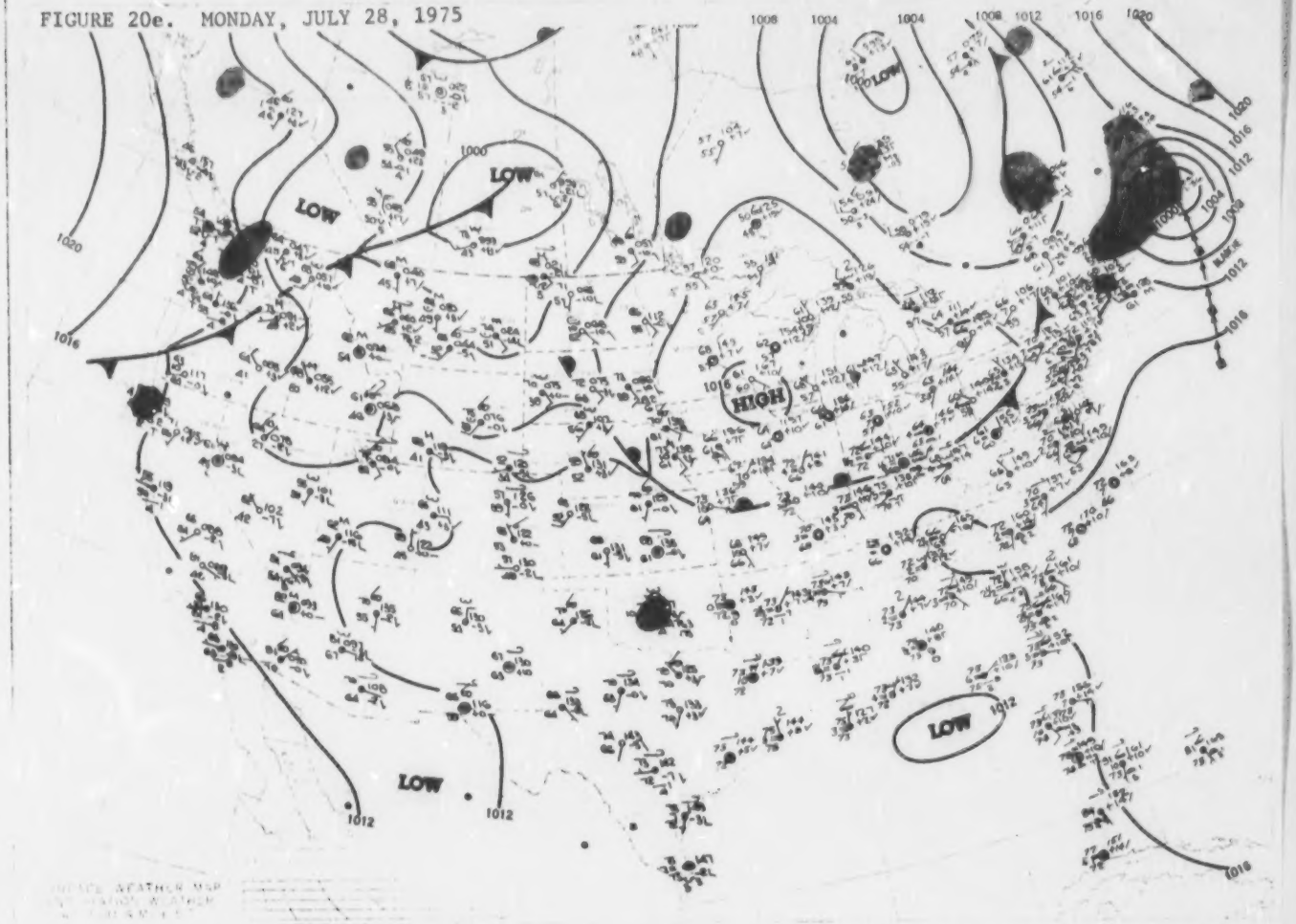
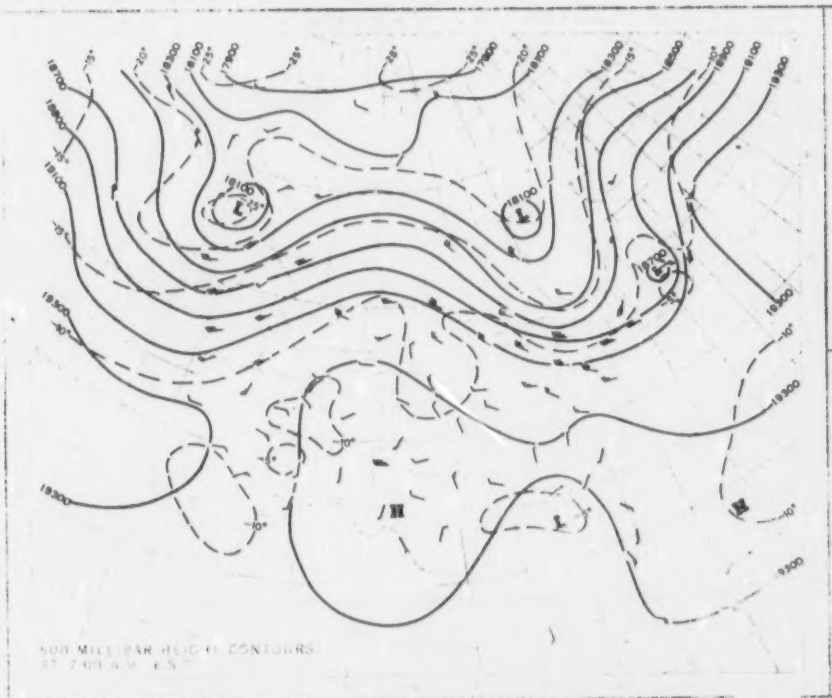

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
109
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 28, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 900.000 PPT
3--CARBON TETRACHLORIDE 900.000 PPT

FIGURE 20d.

FIGURE 20e. MONDAY, JULY 28, 1975





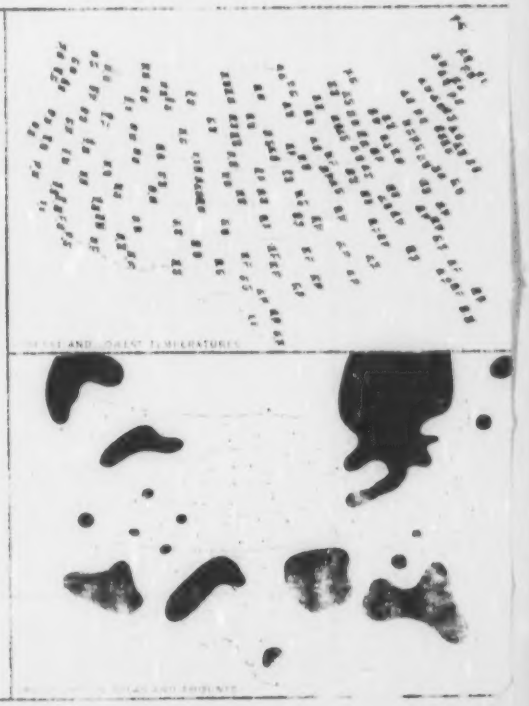


TABLE 17a. JULY 29, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.537	24
2--WIND SPEED (MPH)	4.150	24
3--WIND DIRECTION (DEGREES)	281.227	24
4--TEMPERATURE (CENTIGRADE)	22.561	24
5--RELATIVE HUMIDITY (PERCENT)	56.916	24
6--OZONE (PPM)	0.020	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.007	24
10--METHANE (PPMC)	1.387	24
11--NON-METHANE HYDROCARBON (PPMC)	0.495	24
12--CARBON MONOXIDE (PPM)	0.162	24
13--ETHANE (PPMC)	0.000	24
14--ETHYLENE (PPMC)	0.007	9
16--ACETYLENE (PPMC)	0.[illegible]1	24
19--FLUOROCARBON-11 (PPT)	1[illegible].	24
20--CARBON TETRACHLORIDE (PPT)	107.	24

TABLE 17b.

SUBSTANCE	HOUR AVERAGES FOR JULY 29, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.650	2.225	3.750	5.050	6.125	6.875
2--WIND SPEED (MPH)	2.100	3.000	1.900	1.100	0.800	1.900	2.000	4.200	4.900	6.500	7.100	7.000
3--WIND DIRECTION (DEGREES)	185.	246.	275.	258.	246.	215.	165.	256.	311.	309.	292.	295.
4--TEMPERATURE (CENTIGRADE)	17.	17.	17.	16.	16.	15.	17.	22.	26.	27.	27.	28.
5--RELATIVE HUMIDITY (PERCENT)	83.	84.	83.	85.	90.	92.	87.	62.	43.	35.	29.	29.
6--OZONE (PPM)	0.001	0.004	0.010	0.008	0.007	0.004	0.008	0.021	0.028	0.026	0.030	0.034
7--NITRIC OXIDE (PPM)	0.005	0.002	0.001	0.001	0.001	0.001	0.002	0.008	0.003	0.003	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.013	0.010	0.007	0.006	0.005	0.004	0.002	0.003	0.002	0.002	0.000	0.003
9--NITROGEN OXIDES (PPM)	0.018	0.012	0.008	0.007	0.006	0.005	0.003	0.011	0.005	0.005	0.002	0.005
10--METHANE (PPMC)	1.810	1.850	1.960	1.880	1.600	1.500	1.750	1.250	1.100	1.100	1.100	1.100
11--NON-METHANE HYDROCARBON (PPMC)	0.933	1.026	0.550	0.609	0.461	0.391	0.425	0.436	0.426	0.393	0.386	0.293
12--CARBON MONOXIDE (PPM)	0.450	0.325	0.200	0.200	0.212	0.212	0.162	0.250	0.137	0.087	0.050	0.037
13--ETHANE (PPMC)	0.001	.000	0.001	0.001	0.002	.000	.000	.000	.000	.000	.000	.000
14--ETHYLENE (PPMC)	0.006	0.013	0.001	0.001	0.008	.000	-0.001	-0.001	-0.002	-0.002	-0.003	-0.004
16--ACETYLENE (PPMC)	0.005	0.002	0.001	0.001	0.002	.000	.000	.000	.000	.000	.000	.000
19--FLUOROCARBON-11 (PPT)	188.	186.	136.	129.	132.	126.	151.	169.	100.	107.	107.	92.
20--CARBON TETRACHLORIDE (PPT)	176.	180.	135.	120.	125.	105.	95.	127.	135.	85.	85.	70.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.950	7.200	6.850	5.375	5.025	3.025	1.325	0.400	0.050	.000	.000	.000
2--WIND SPEED (MPH)	7.400	7.800	7.700	7.800	5.800	6.300	4.600	1.700	2.500	2.400	1.200	1.900
3--WIND DIRECTION (DEGREES)	312.	328.	327.	323.	297.	330.	341.	297.	310.	247.	301.	285.
4--TEMPERATURE (CENTIGRADE)	29.	29.	30.	29.	30.	28.	26.	24.	21.	19.	17.	16.
5--RELATIVE HUMIDITY (PERCENT)	30.	30.	29.	29.	28.	30.	36.	46.	64.	72.	81.	87.
6--OZONE (PPM)	0.037	0.043	0.039	0.036	0.038	0.038	0.029	0.016	0.004	0.002	0.001	0.005
7--NITRIC OXIDE (PPM)	0.004	0.003	0.005	0.005	0.007	0.005	0.001	0.004	0.002	0.002	0.002	0.001
8--NITROGEN DIOXIDE (PPM)	.000	0.001	0.001	0.004	0.003	0.002	0.001	0.005	0.005	0.009	0.009	0.009
9--NITROGEN OXIDES (PPM)	0.004	0.004	0.005	0.009	0.010	0.007	0.002	0.010	0.007	0.011	0.012	0.009
10--METHANE (PPMC)	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.120	1.210	1.500	1.690	2.070
11--NON-METHANE HYDROCARBON (PPMC)	0.506	0.453	0.498	0.433	0.433	0.378	0.464	0.395	0.420	0.584	0.586	0.388
12--CARBON MONOXIDE (PPM)	0.017	0.017	0.025	0.063	0.112	0.050	0.100	0.237	0.187	0.237	0.283	0.237
13--ETHANE (PPMC)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
14--ETHYLENE (PPMC)	-0.004	-0.005	-0.006	-0.006	-0.007	-0.007	-0.008	-0.009	-0.009	0.010	0.010	0.010
16--ACETYLENE (PPMC)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0.016
19--FLUOROCARBON-11 (PPT)	92.	94.	85.	88.	98.	94.	102.	107.	127.	172.	239.	144.
20--CARBON TETRACHLORIDE (PPT)	70.	30.	45.	90.	120.	90.	98.	115.	125.	150.	100.	105.

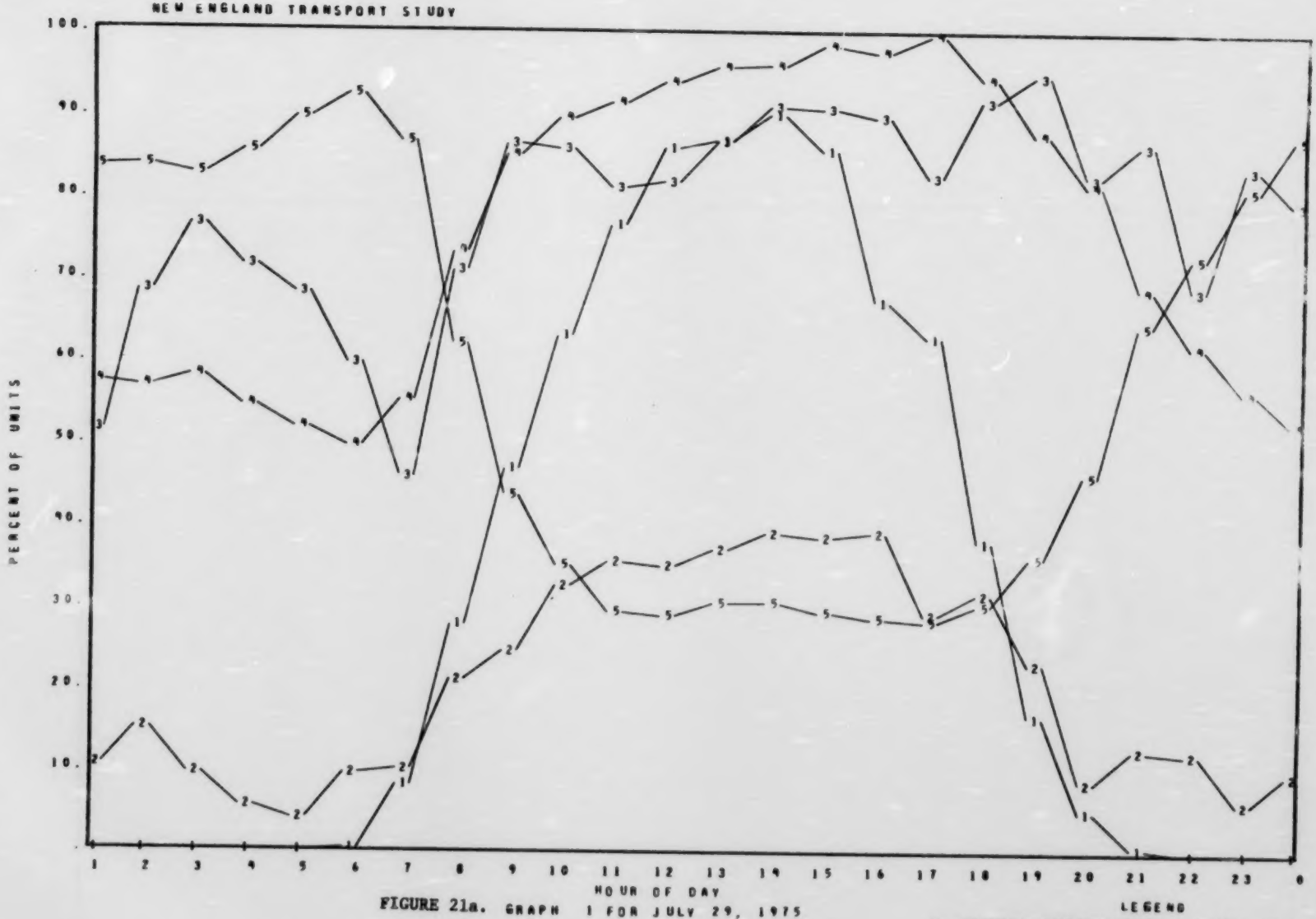
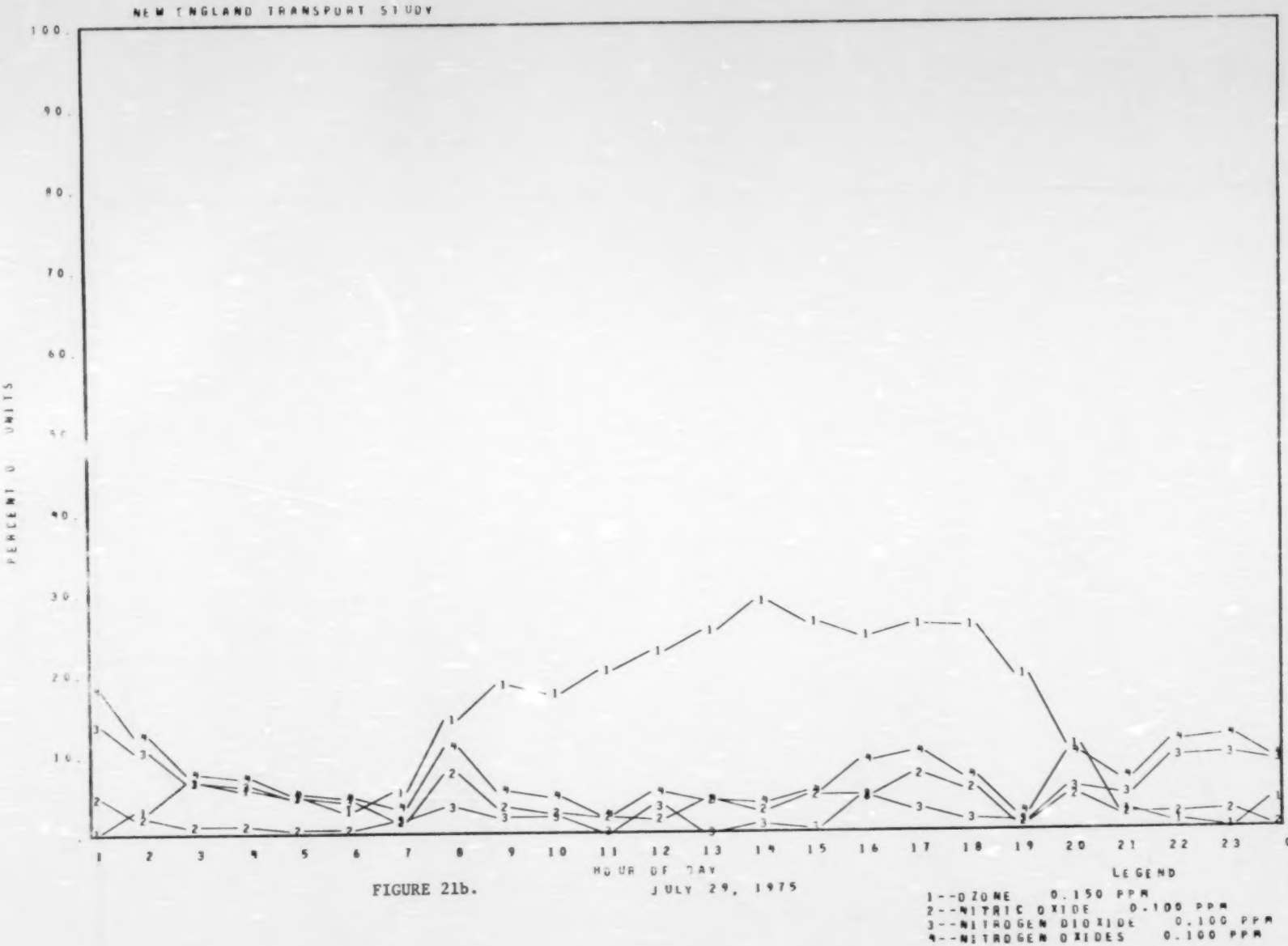


FIGURE 21a. GRAPH 1 FOR JULY 29, 1975


NEW ENGLAND TRANSPORT STUDY
100.
90.
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70.
60.
50.
40.
30.
20.
10.
PERCENT U UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 29, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 21b.

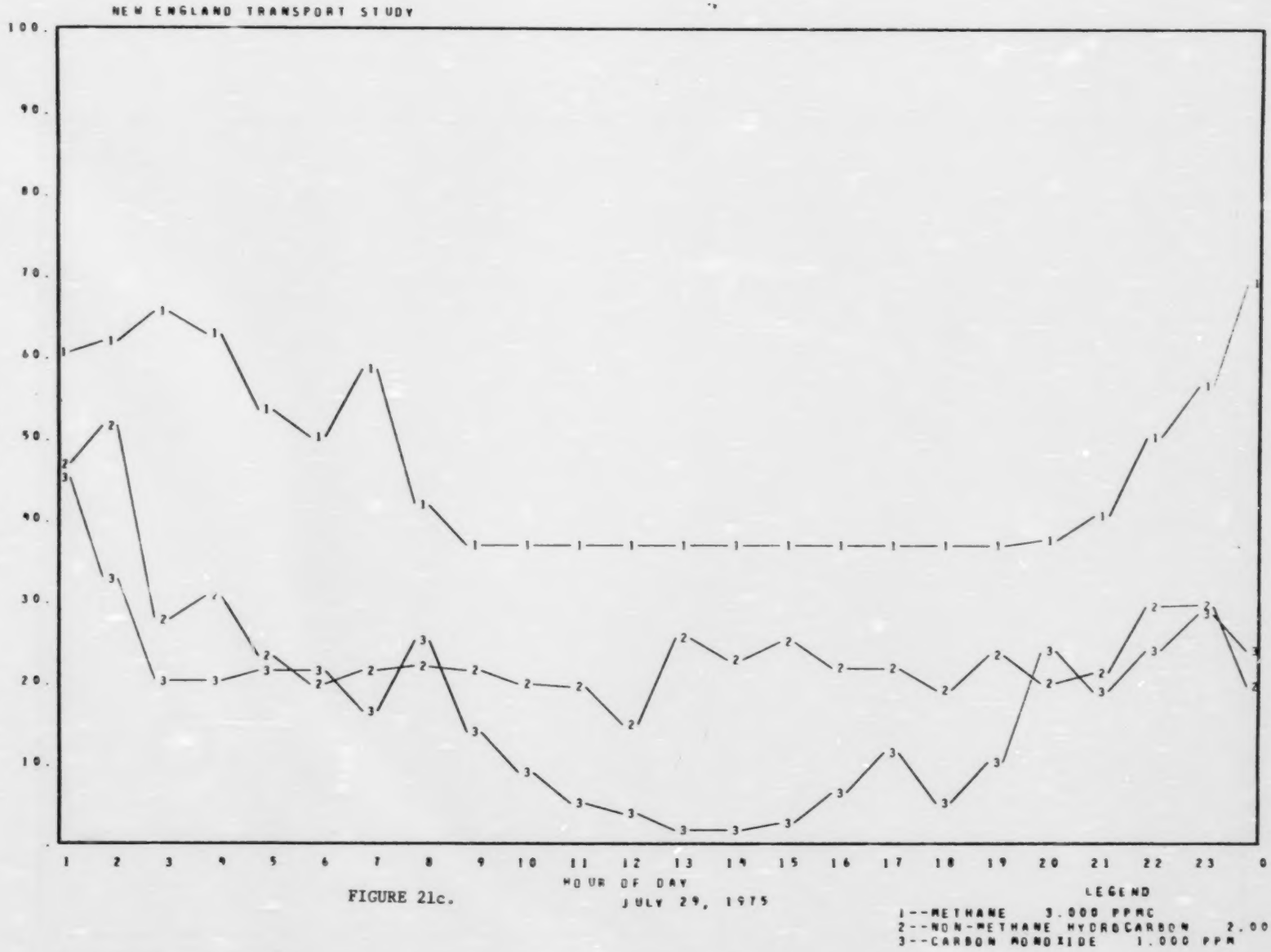

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 29, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 21c.

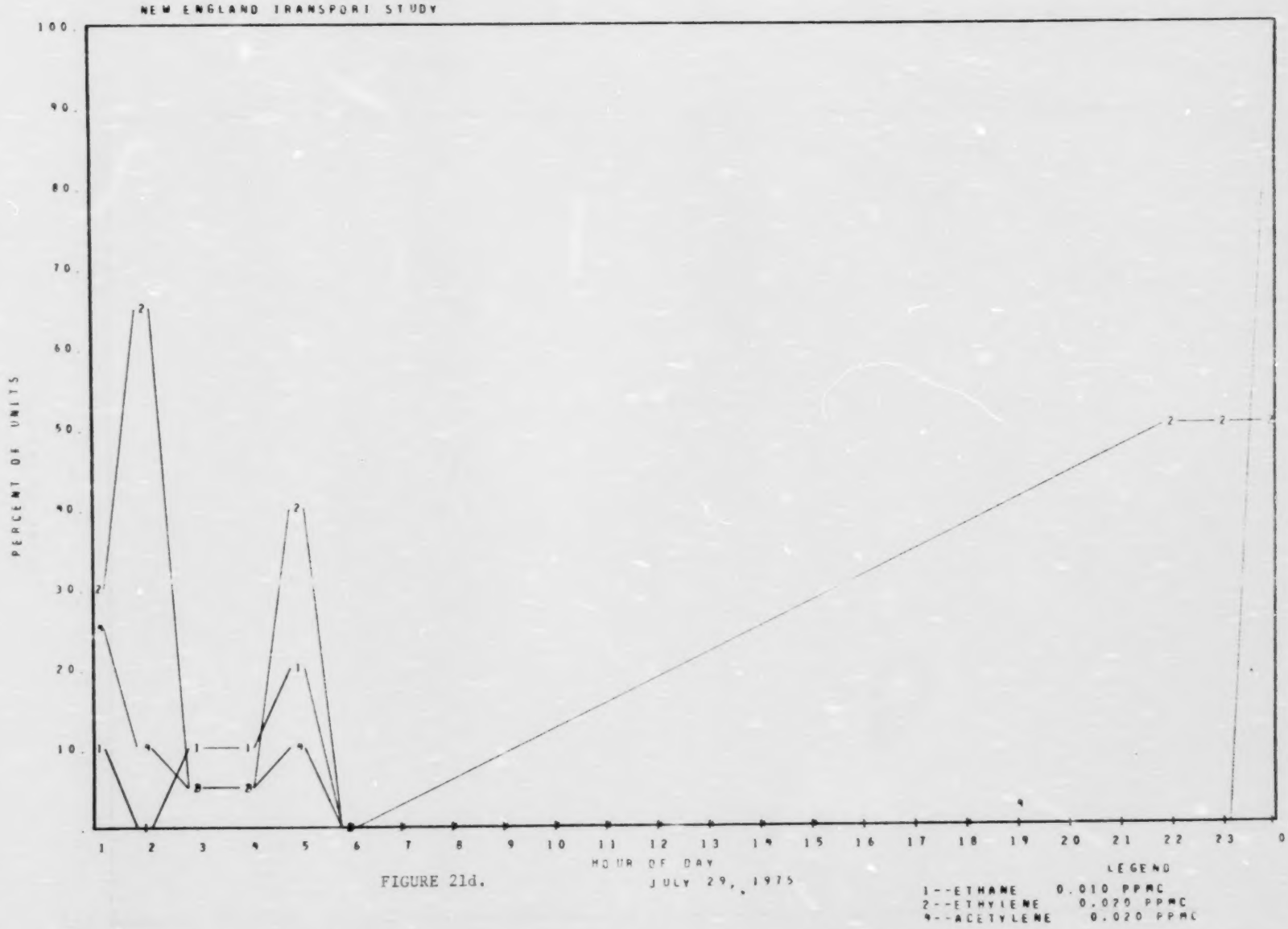

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 29, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 21d.

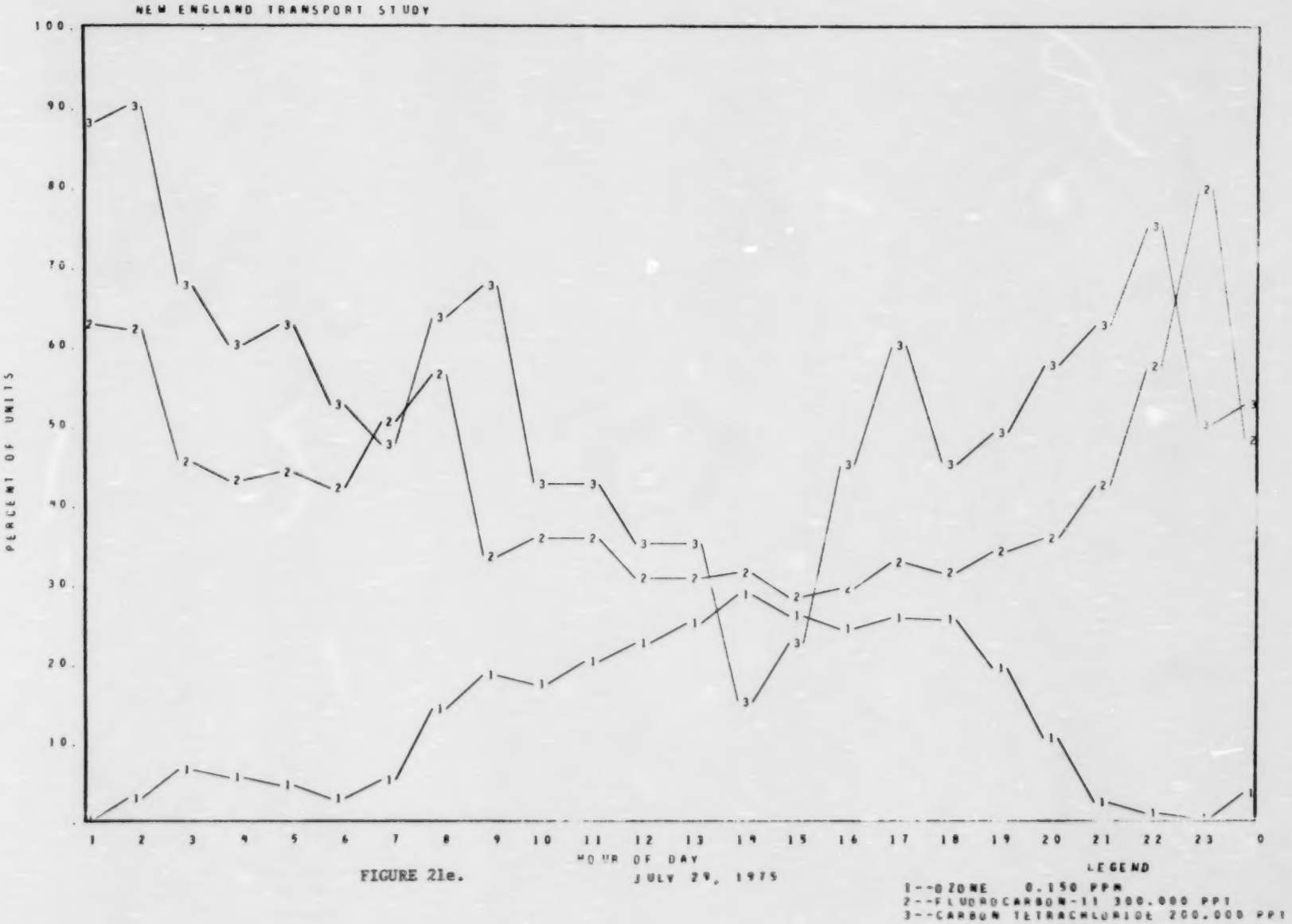
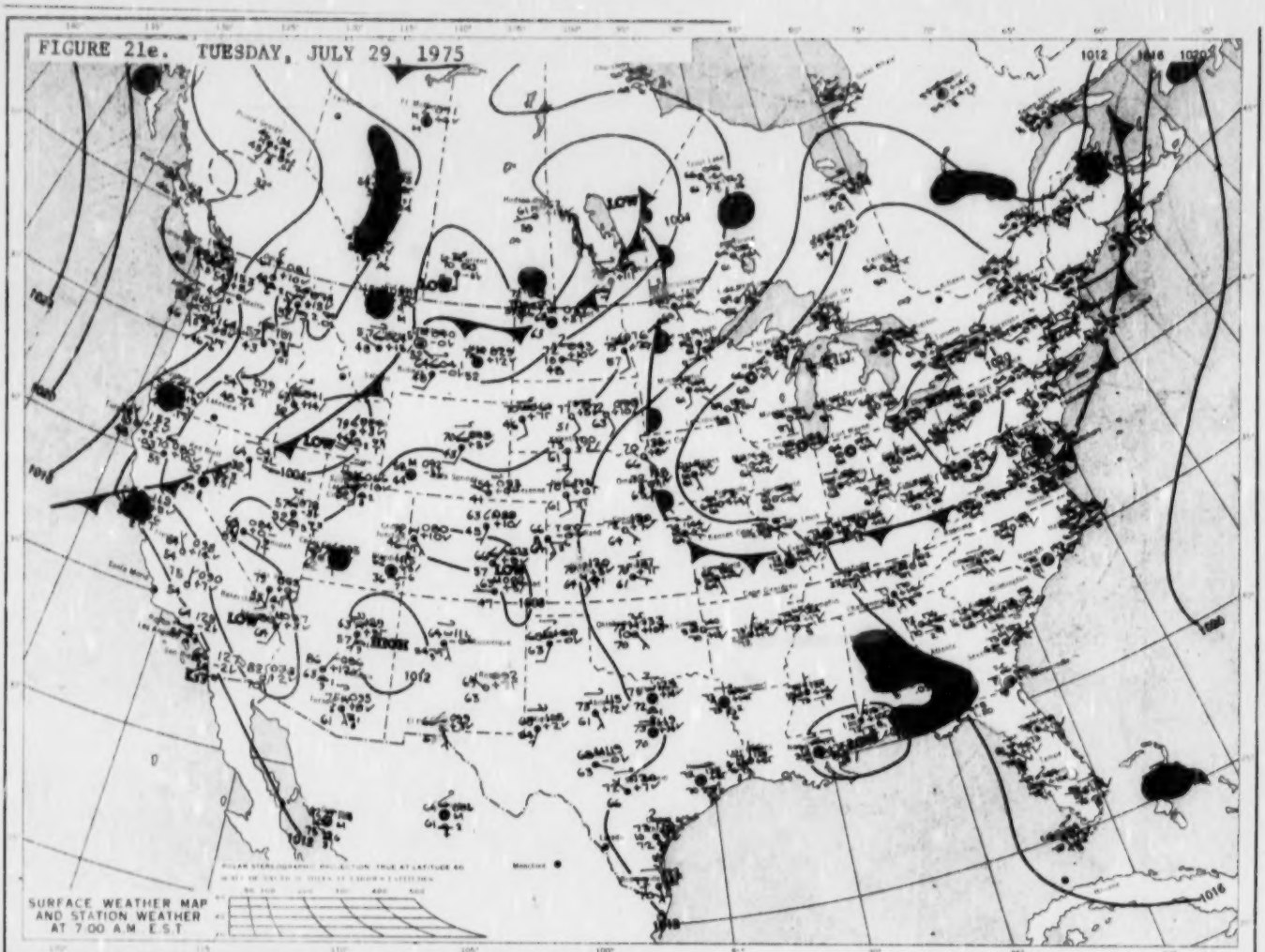

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 29, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 21e.

FIGURE 21e. TUESDAY, JULY 29, 1975



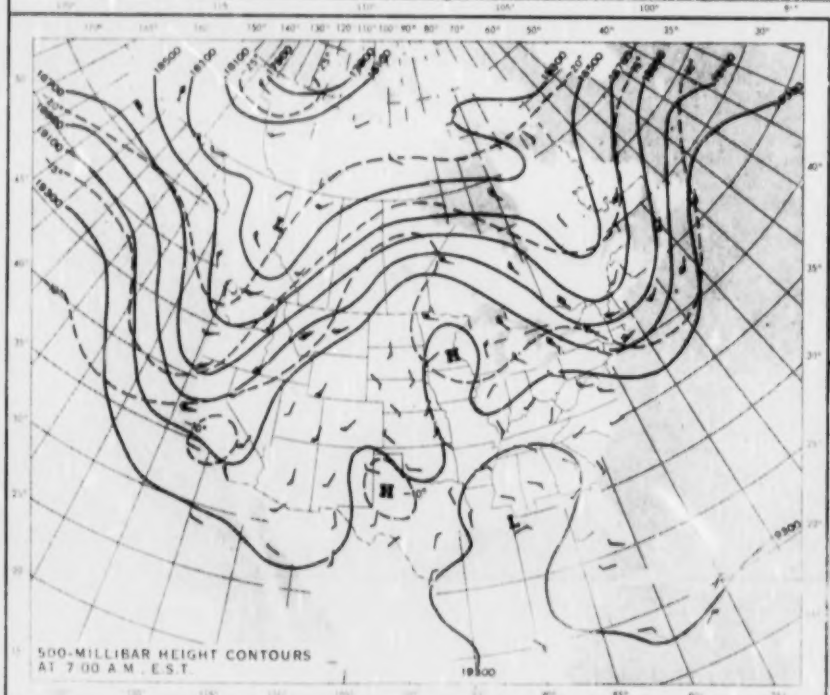


TABLE 18a. JULY 30, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.514	24
2--WIND SPEED (MPH)	2.508	24
3--WIND DIRECTION (DEGREES)	229.324	24
4--TEMPERATURE (CENTIGRADE)	23.307	24
5--RELATIVE HUMIDITY (PERCENT)	59.747	24
6--OZONE (PPM)	0.021	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.007	24
10--METHANE (PPMC)	1.631	24
11--NON-METHANE HYDROCARBON (PPMC)	0.189	24
12--CARBON MONOXIDE (PPM)	0.180	24
19--FLUOROCARBON-11 (PPT)	146.	24
20--CARBON TETRACHLORIDE (PPT)	107.	24

TABLE 18b.

SUBSTANCE	HOUR AVERAGES FOR JULY 30, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.850	2.250	3.675	4.925	5.875	6.575
2--WIND SPEED (MPH)	2.000	2.700	1.200	1.500	2.000	1.500	1.200	1.000	1.500	2.300	3.000	3.900
3--WIND DIRECTION (DEGREES)	217.	202.	289.	211.	321.	339.	295.	343.	266.	155.	157.	145.
4--TEMPERATURE (CENTIGRADE)	15.	15.	14.	14.	13.	12.	15.	19.	22.	26.	29.	30.
5--RELATIVE HUMIDITY (PERCENT)	90.	91.	93.	93.	94.	95.	84.	68.	58.	46.	41.	37.
6--OZONE (PPM)	0.001	.000	.000	0.003	0.000	.000	.000	0.009	0.000	0.013	0.031	0.043
7--NITRIC OXIDE (PPM)	0.001	0.002	.000	.000	.000	0.001	0.003	0.004	0.002	0.000	0.003	0.001
8--NITROGEN DIOXIDE (PPM)	0.009	0.012	0.008	0.004	0.001	0.002	0.003	0.002	0.003	0.003	0.002	0.003
9--NITROGEN OXIDES (PPM)	0.010	0.014	0.008	0.004	0.001	0.003	0.006	0.007	0.006	0.003	0.004	0.003
10--METHANE (PPMC)	2.133	1.970	1.593	1.878	1.505	1.500	1.491	1.503	1.606	1.468	1.479	1.421
11--NON-METHANE HYDROCARBON (PPMC)	0.235	0.207	0.163	0.188	0.095	0.114	0.083	0.082	0.077	0.155	0.123	0.182
12--CARBON MONOXIDE (PPM)	0.287	0.375	0.287	0.200	0.200	0.225	0.237	0.237	0.150	0.125	0.087	0.062
19--FLUOROCARBON-11 (PPT)	187.	138.	140.	148.	134.	135.	145.	125.	119.	122.	155.	144.
20--CARBON TETRACHLORIDE (PPT)	100.	75.	98.	105.	100.	68.	80.	75.	90.	90.	120.	180.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.000	6.950	6.550	5.825	4.675	3.400	1.350	0.350	0.050	.000	.000	.000
2--WIND SPEED (MPH)	3.000	3.900	4.500	4.000	3.600	3.300	2.100	1.500	1.900	3.000	2.900	2.700
3--WIND DIRECTION (DEGREES)	239.	196.	205.	218.	248.	257.	248.	241.	186.	189.	143.	195.
4--TEMPERATURE (CENTIGRADE)	31.	32.	32.	32.	32.	31.	30.	27.	24.	22.	21.	21.
5--RELATIVE HUMIDITY (PERCENT)	33.	31.	31.	31.	32.	33.	37.	43.	62.	68.	71.	72.
6--OZONE (PPM)	0.038	0.040	0.037	0.041	0.045	0.039	0.036	0.038	0.009	0.020	0.025	0.029
7--NITRIC OXIDE (PPM)	0.001	0.001	0.003	0.005	0.007	0.005	0.005	0.004	0.003	0.002	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.002	0.001	0.002	0.002	0.005	0.002	0.004	0.006	0.013	0.013	0.010	0.010
9--NITROGEN OXIDES (PPM)	0.003	0.002	0.004	0.007	0.012	0.007	0.009	0.011	0.016	0.016	0.012	0.012
10--METHANE (PPMC)	1.398	1.395	1.393	1.361	1.355	1.356	1.380	1.381	2.311	2.510	1.565	2.179
11--NON-METHANE HYDROCARBON (PPMC)	0.182	0.197	0.396	0.349	0.237	0.195	0.150	0.158	0.172	0.330	0.185	0.272
12--CARBON MONOXIDE (PPM)	0.025	.000	0.013	0.137	0.087	0.075	0.100	0.125	0.237	0.362	0.350	0.337
19--FLUOROCARBON-11 (PPT)	111.	111.	102.	133.	117.	122.	130.	208.	178.	246.	153.	203.
20--CARBON TETRACHLORIDE (PPT)	100.	90.	105.	75.	80.	95.	135.	165.	155.	143.	108.	142.

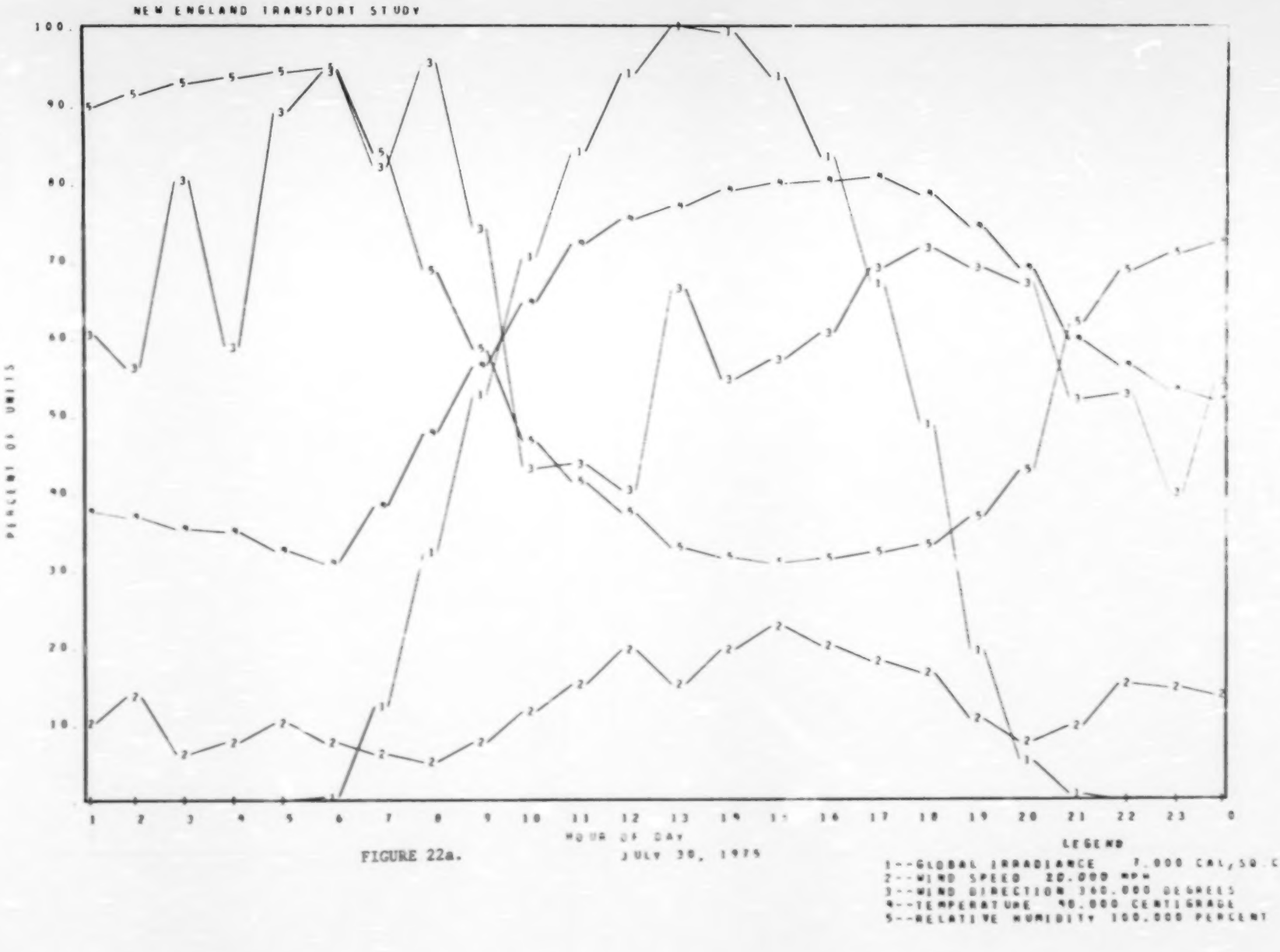
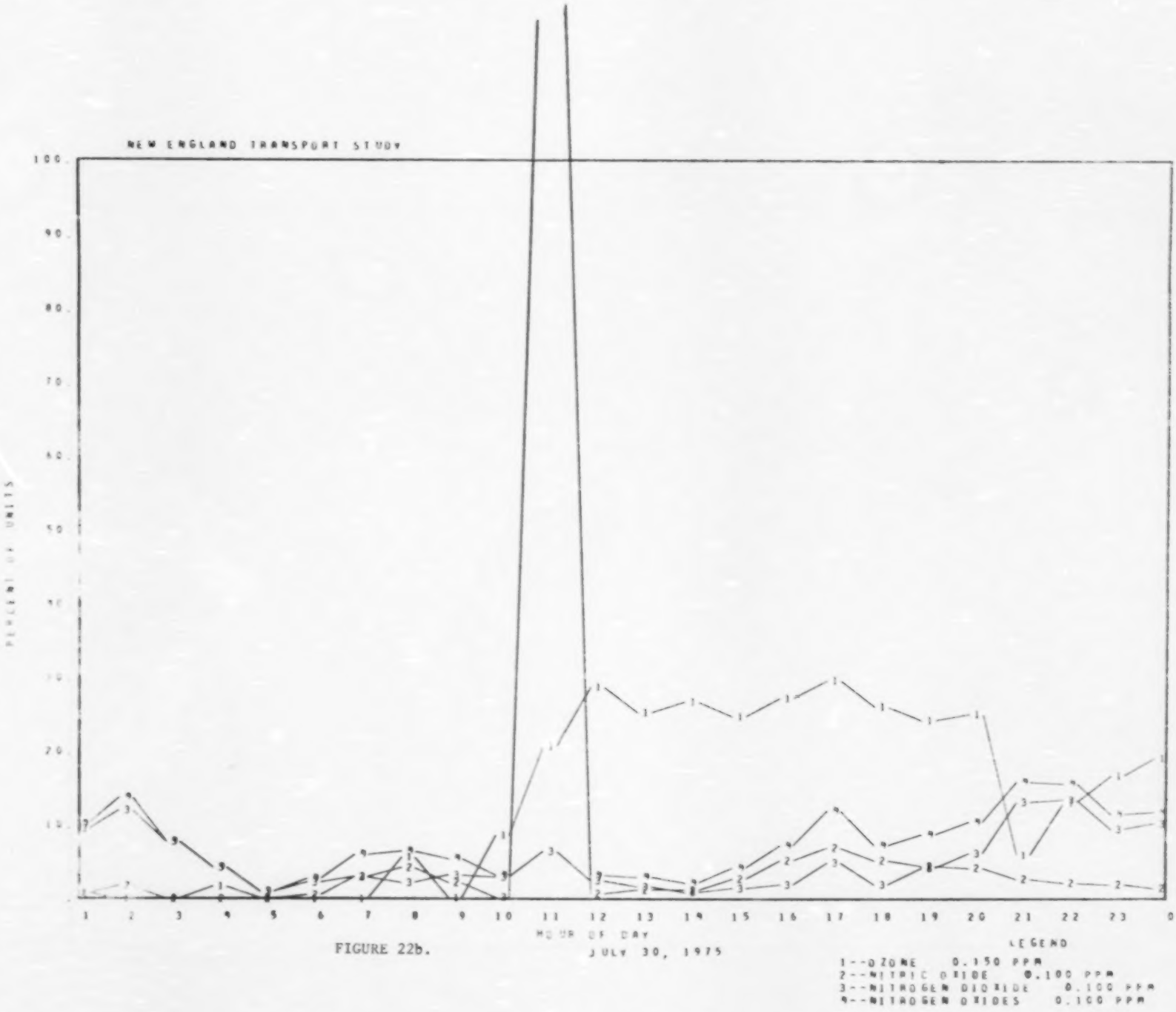

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
JULY 30, 1975
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 22a.


NEW ENGLAND TRANSPORT STUDY
100.
90.
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70.
60.
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40.
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20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 30, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
9--NITROGEN OXIDES 0.100 PPM

FIGURE 22b.

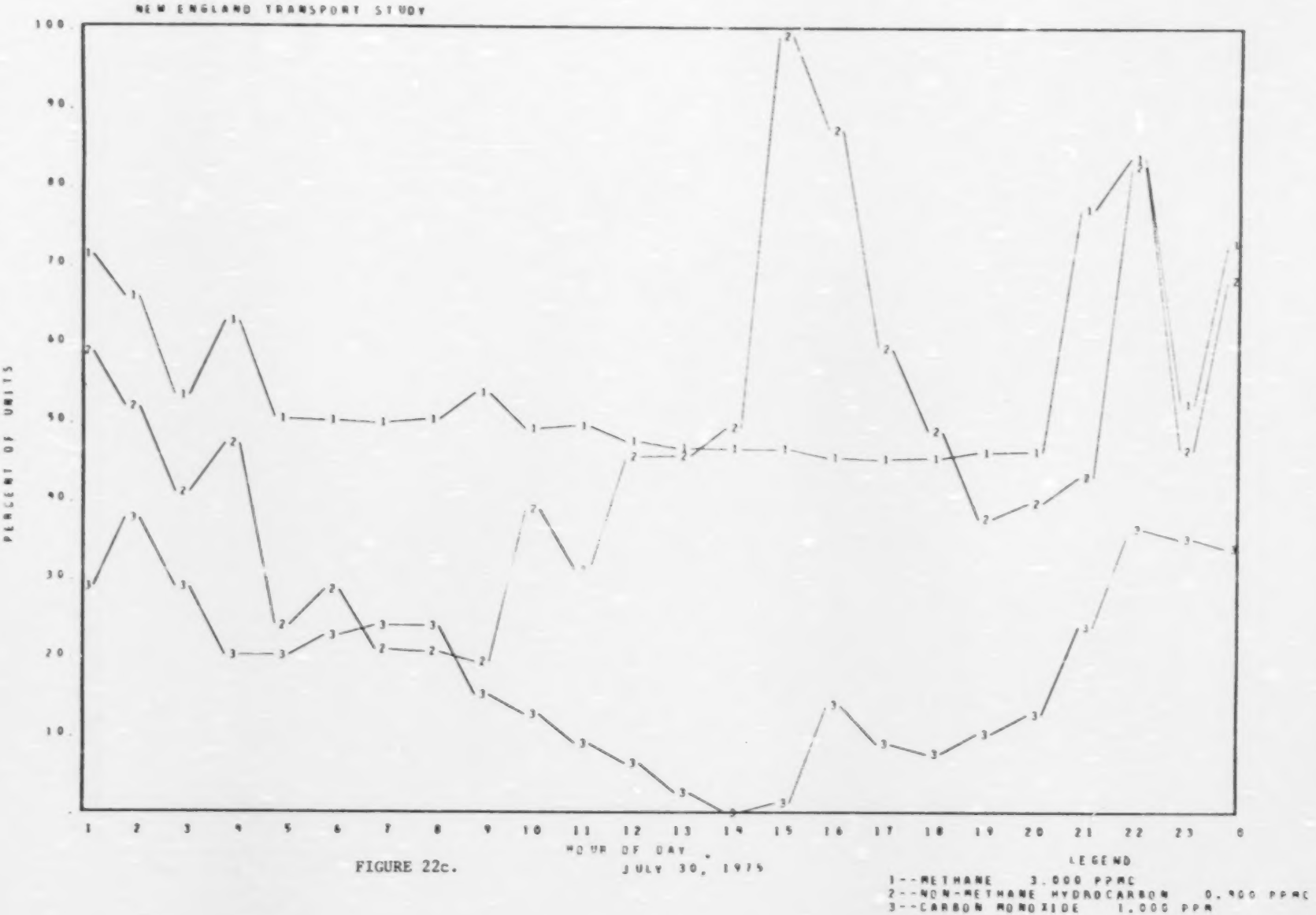

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 30, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.900 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 22c.

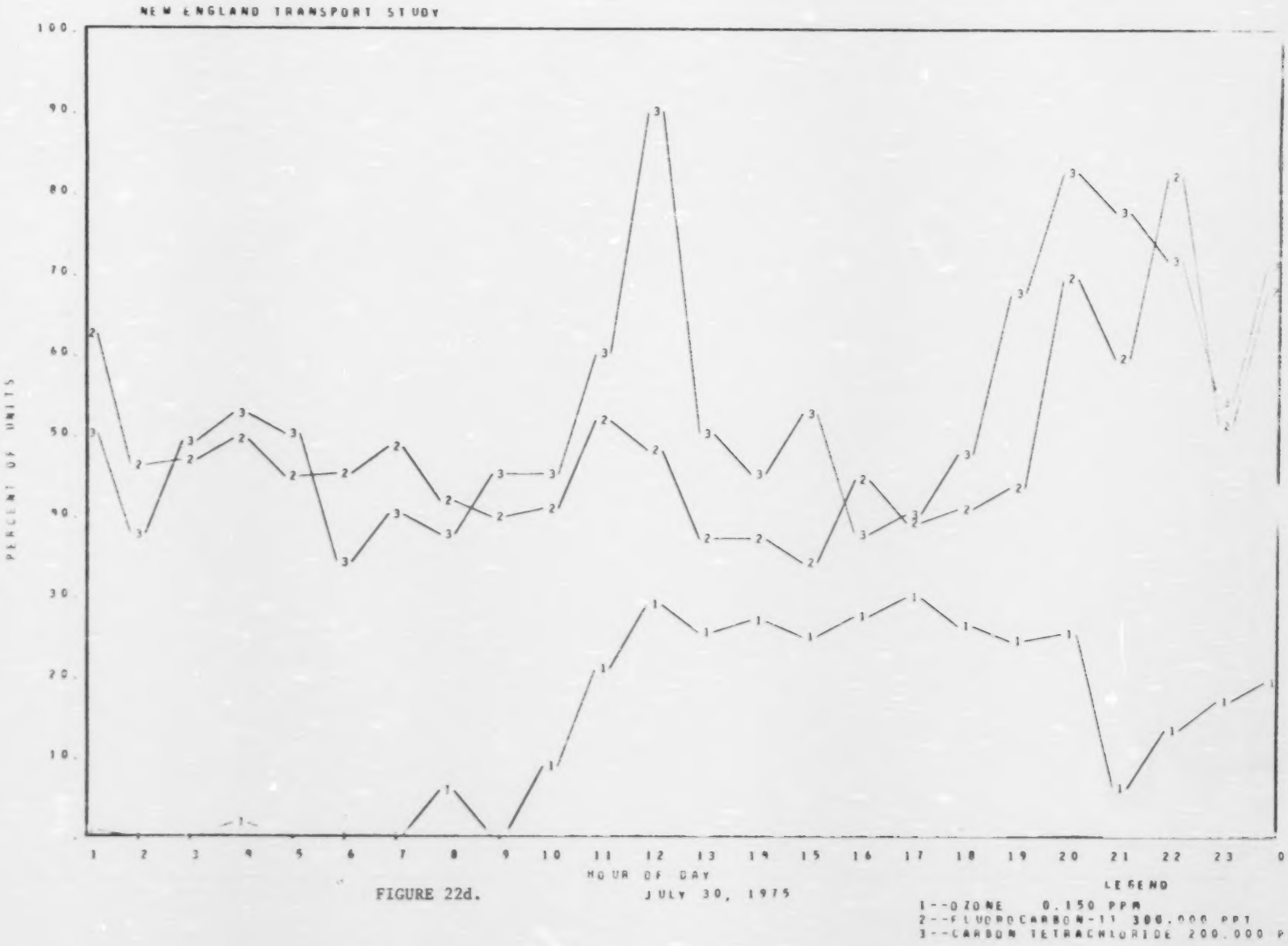

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 30, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 22d.

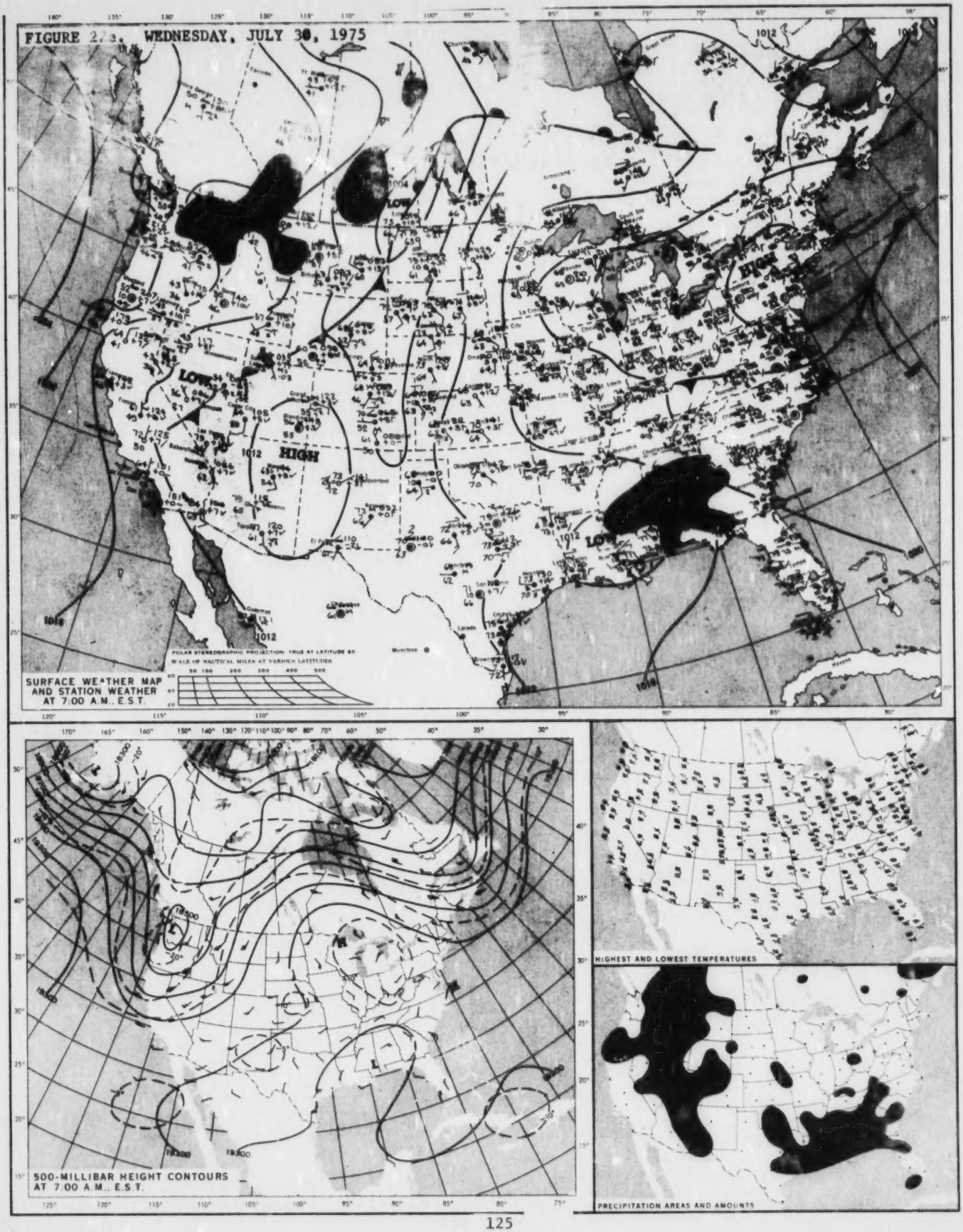


FIGURE 2.3. WEDNESDAY, JULY 30, 1975
SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.
500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.
HIGHEST AND LOWEST TEMPERATURES
PRECIPITATION AREAS AND AMOUNTS

TABLE 19a. JULY 31, 1975

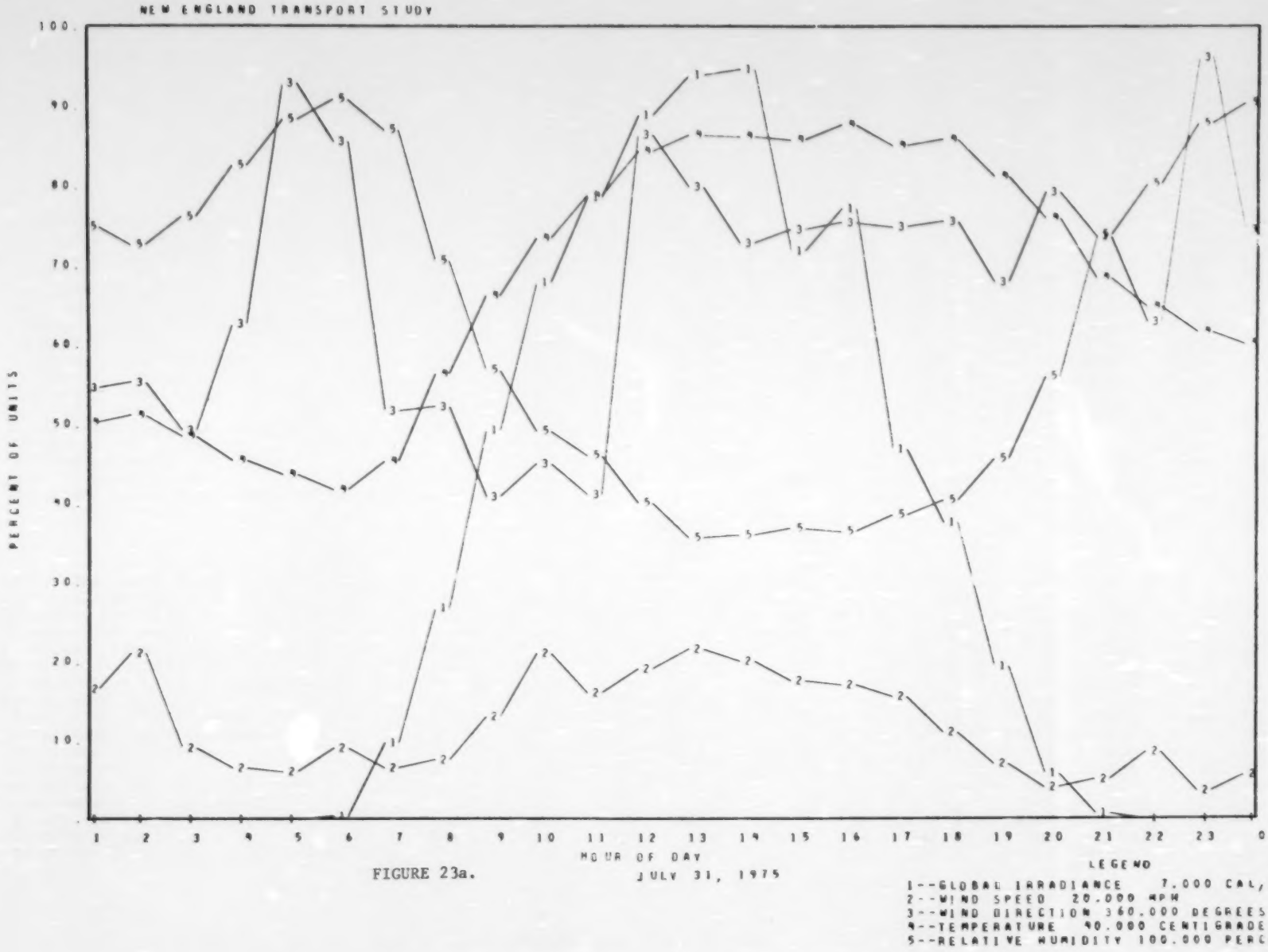
SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.243	24
2--WIND SPEED (MPH)	2.392	24
3--WIND DIRECTION (DEGREES)	243.626	24
4--TEMPERATURE (CENTIGRADE)	26.894	24
5--RELATIVE HUMIDITY (PERCENT)	62.138	24
6--OZONE (PPM)	0.041	18
7--NITRIC OXIDE (PPM)	0.005	24
8--NITROGEN DIOXIDE (PPM)	0.007	24
9--NITROGEN OXIDES (PPM)	0.012	24
10--METHANE (PPMC)	1.748	24
11--NON-METHANE HYDROCARBON (PPMC)	0.267	24
12--CARBON MONOXIDE (PPM)	0.331	22
13--ETHANE (PPMC)	0.003	3
14--ETHYLENE (PPMC)	0.008	4
16--ACETYLENE (PPMC)	0.007	4
19--FLUOROCARBON-11 (PPT)	166.	24
20--CARBON TETRACHLORIDE (PPT)	126.	24

TABLE 19b.

HOUR AVERAGES FOR JULY 31, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.675	1.875	3.450	4.750	5.500	6.225
2--WIND SPEED (MPH)	3.300	4.200	1.800	1.300	1.200	1.800	1.300	1.500	2.600	4.200	3.200	3.800
3--WIND DIRECTION (DEGREES)	196.	199.	177.	226.	335.	308.	186.	188.	147.	162.	148.	311.
4--TEMPERATURE (CENTIGRADE)	20.	20.	19.	18.	17.	17.	18.	23.	26.	29.	32.	34.
5--RELATIVE HUMIDITY (PERCENT)	75.	73.	76.	83.	88.	91.	87.	71.	57.	49.	46.	40.
6--OZONE (PPM)	0.017	0.016	-0.016	-0.017	-0.017	-0.018	-0.018	0.018	0.032	0.051	0.073	0.074
7--NITRIC OXIDE (PPM)	0.002	0.001	0.001	0.001	0.001	0.001	0.003	0.010	0.005	0.005	0.005	0.006
8--NITROGEN DIOXIDE (PPM)	0.011	0.008	0.008	0.007	0.005	0.004	0.004	0.008	0.008	0.004	0.003	0.002
9--NITROGEN OXIDES (PPM)	0.012	0.009	0.010	0.008	0.006	0.005	0.007	0.018	0.013	0.009	0.008	0.008
10--METHANE (PPMC)	2.323	2.056	1.745	2.953	1.791	1.528	3.078	1.973	1.758	1.461	1.453	1.425
11--NON-METHANE HYDROCARBON (PPMC)	0.275	0.195	0.183	0.410	0.227	0.122	0.417	0.181	0.210	0.188	0.163	0.254
12--CARBON MONOXIDE (PPM)	0.425	0.375	0.387	0.400	0.350	0.287	0.313	0.525	0.412	0.250	0.212	-0.183
13--ETHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
14--ETHYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
15--ACETYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	225.	194.	161.	256.	165.	140.	178.	176.	169.	150.	144.	137.
20--CARBON TETRACHLORIDE (PPT)	120.	95.	135.	165.	140.	90.	120.	110.	105.	105.	112.	120.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.575	6.625	5.025	5.400	3.275	2.625	1.350	0.400	0.050	.000	.000	.000
2--WIND SPEED (MPH)	4.300	4.000	3.500	3.400	3.100	2.200	1.400	0.800	1.000	1.700	0.700	1.100
3--WIND DIRECTION (DEGREES)	288.	262.	268.	271.	269.	272.	244.	285.	265.	226.	346.	268.
4--TEMPERATURE (CENTIGRADE)	35.	35.	34.	35.	34.	34.	32.	30.	27.	26.	25.	24.
5--RELATIVE HUMIDITY (PERCENT)	36.	36.	37.	35.	38.	40.	46.	56.	74.	80.	88.	90.
6--OZONE (PPM)	-0.073	0.073	0.075	0.071	0.065	0.053	0.061	0.038	0.005	.000	.000	.000
7--NITRIC OXIDE (PPM)	0.004	0.003	0.005	0.006	0.007	0.010	0.007	0.008	0.009	0.009	0.010	0.013
8--NITROGEN DIOXIDE (PPM)	.000	.000	0.005	0.004	0.006	0.005	0.004	0.007	0.013	0.017	0.013	0.014
9--NITROGEN OXIDES (PPM)	0.004	0.003	0.010	0.009	0.013	0.014	0.012	0.015	0.022	0.027	0.023	0.027
10--METHANE (PPMC)	1.328	1.336	1.338	1.336	1.320	1.335	1.341	1.396	1.744	2.526	1.761	1.646
11--NON-METHANE HYDROCARBON (PPMC)	0.322	0.306	0.323	0.262	0.323	0.244	0.202	0.222	0.354	0.390	0.340	0.296
12--CARBON MONOXIDE (PPM)	-0.154	0.125	0.137	0.137	0.125	0.225	0.100	0.337	0.462	0.600	0.525	0.575
13--ETHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.002	0.003	0.004	-1.000	-1.000
14--ETHYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.012	-0.007	0.002	0.008	0.009	-1.000	-1.000
15--ACETYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.006	-0.004	0.002	0.010	0.009	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	118.	110.	122.	128.	126.	131.	142.	141.	183.	243.	205.	235.
20--CARBON TETRACHLORIDE (PPT)	110.	120.	120.	182.	90.	105.	120.	120.	190.	140.	172.	135.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
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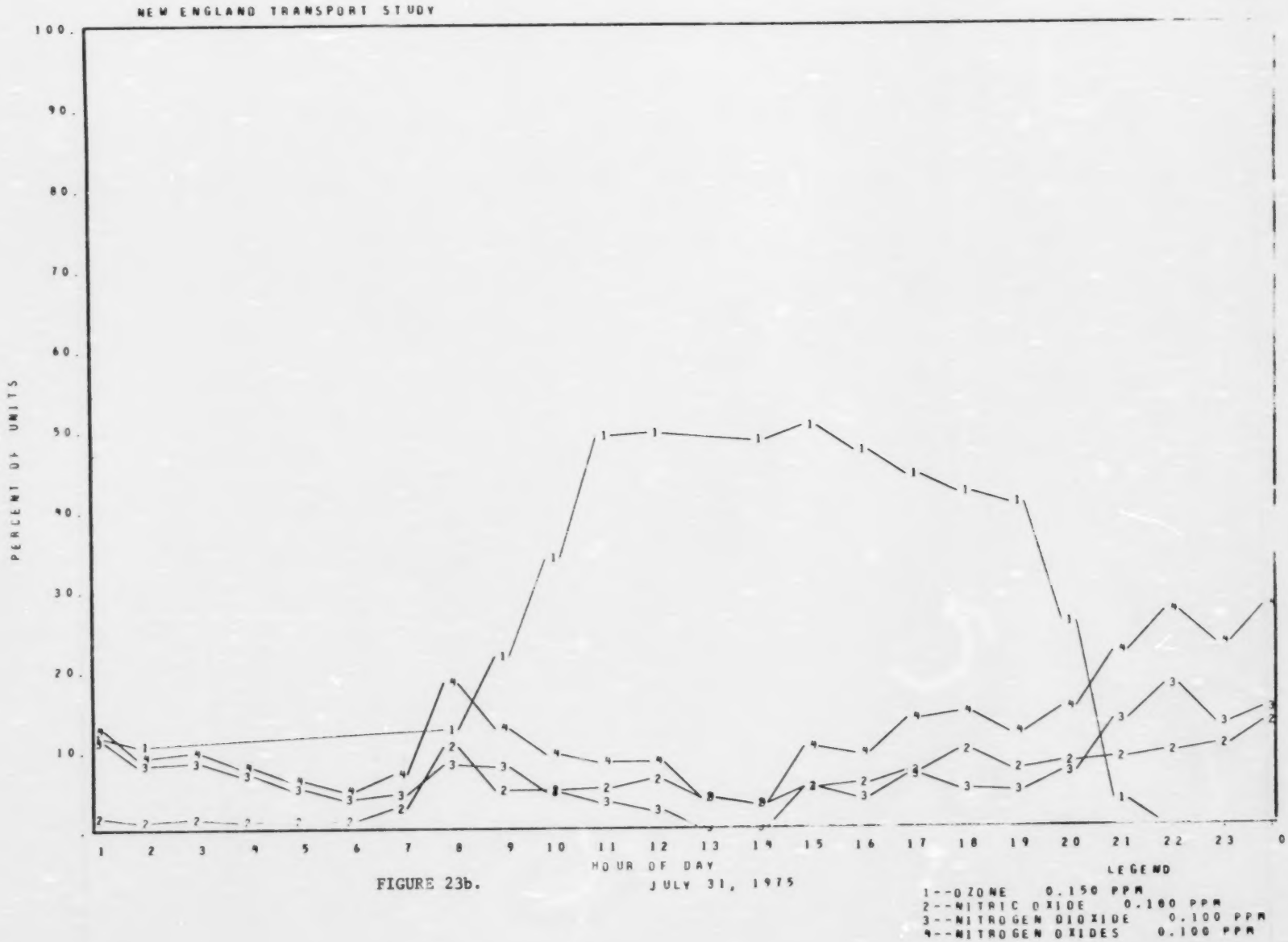
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 31, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 23a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
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70.
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40.
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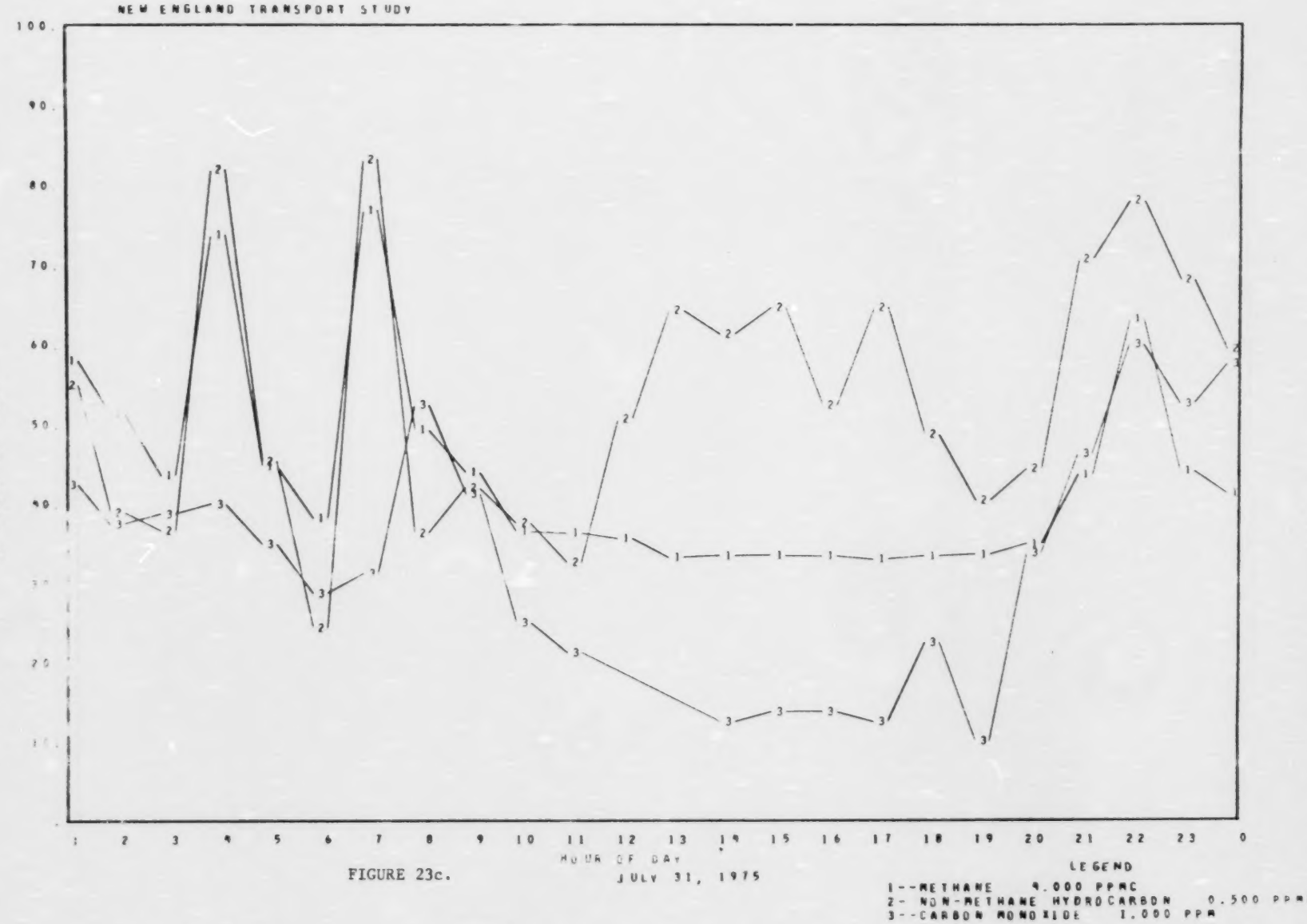
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 31, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 23b.


NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
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40.
30.
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10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 31, 1975
LEGEND
1--METHANE 9.000 PPMC
2- NON-METHANE HYDROCARBON 0.500 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 23c.

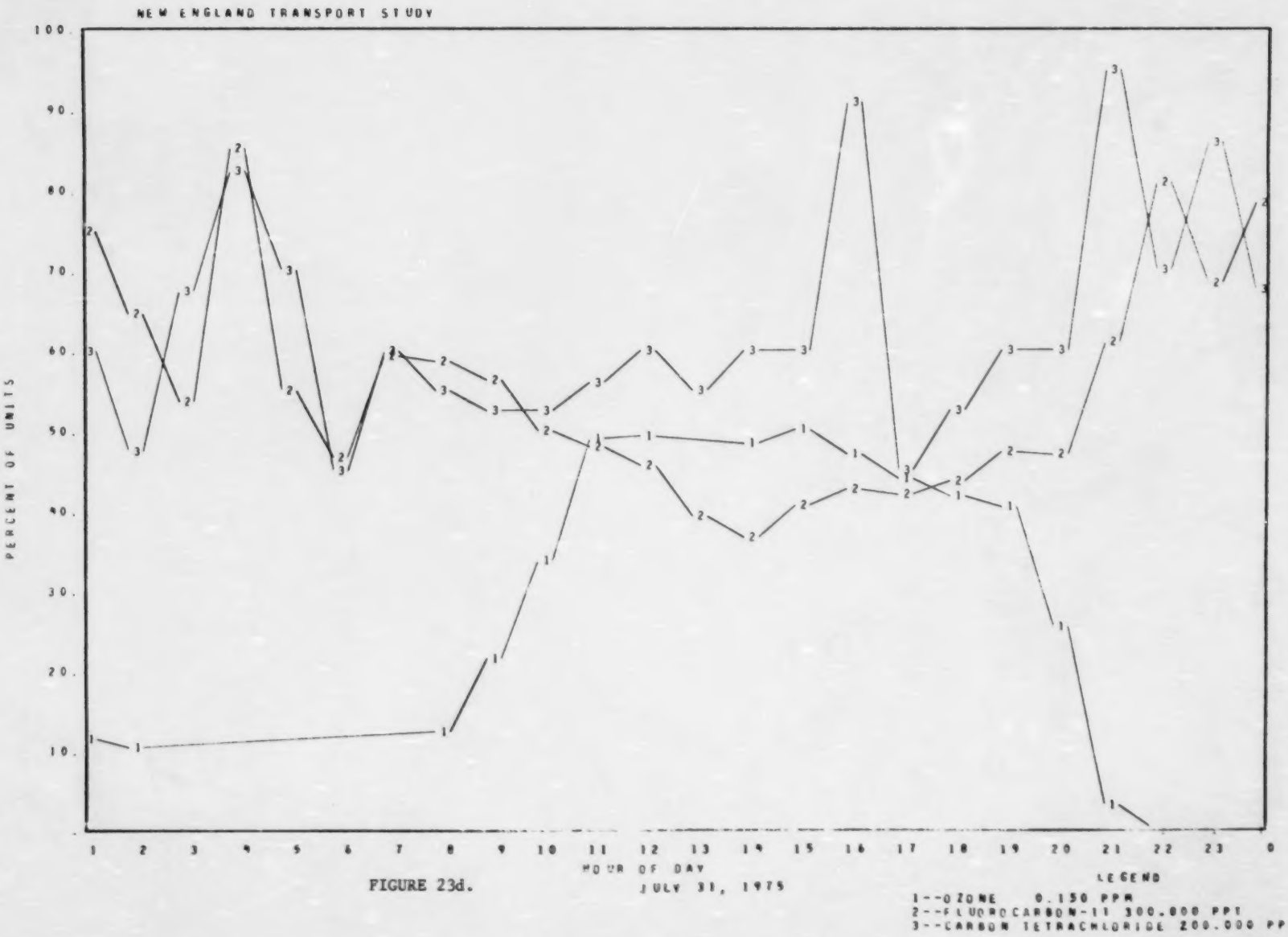
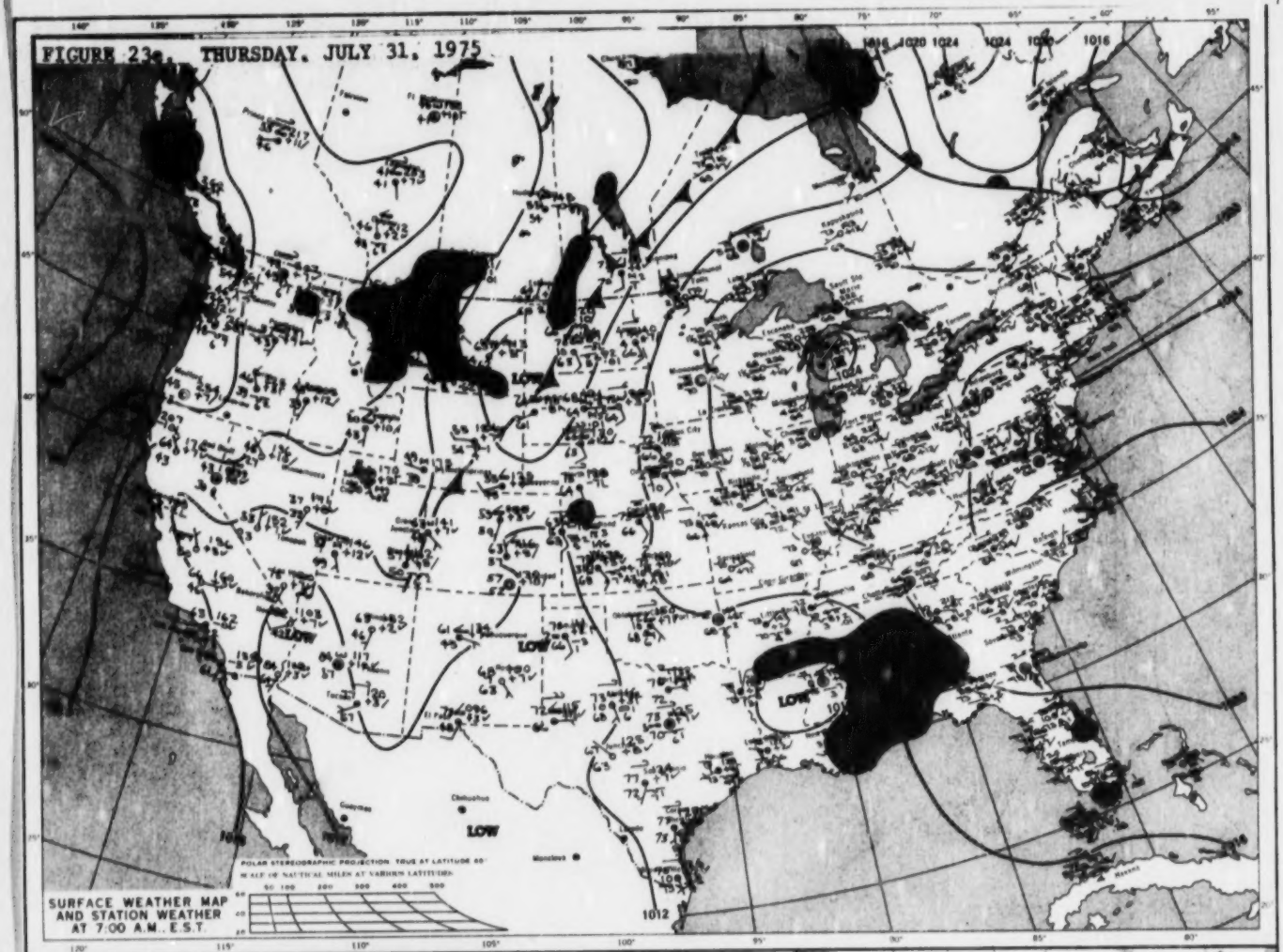
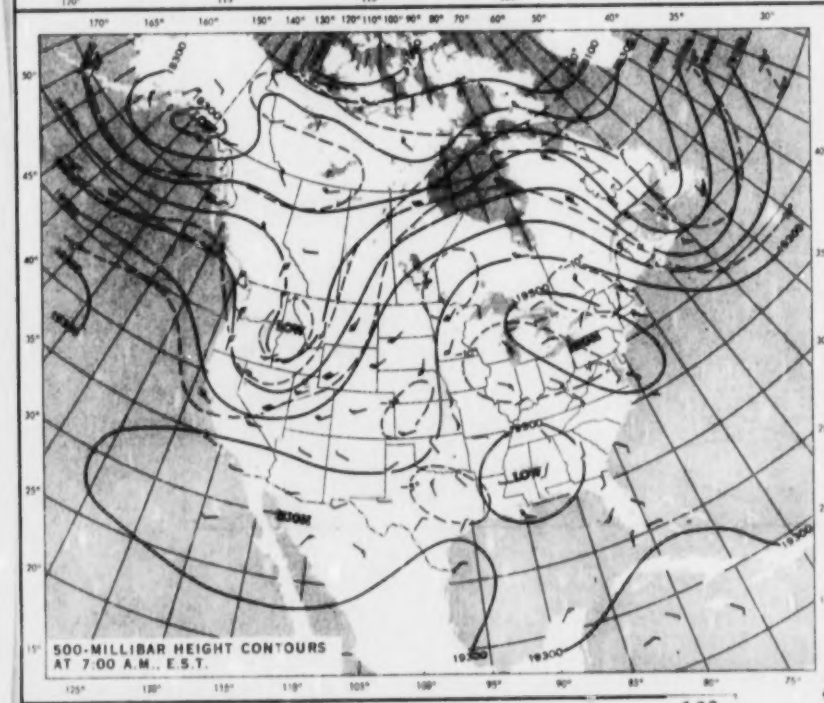

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
JULY 31, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 23d.

FIGURE 23a. THURSDAY, JULY 31, 1975

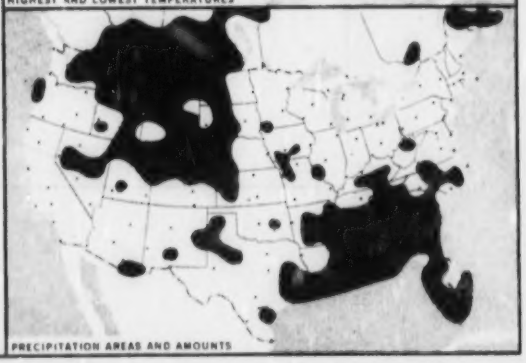


SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.

HIGHEST AND LOWEST TEMPERATURES



PRECIPITATION AREAS AND AMOUNTS

TABLE 20a. AUGUST 1, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.205	24
2--WIND SPEED (MPH)	1.992	24
3--WIND DIRECTION (DEGREES)	264.862	24
4--TEMPERATURE (CENTIGRADE)	28.997	24
5--RELATIVE HUMIDITY (PERCENT)	68.029	24
6--OZONE (PPM)	0.027	24
7--NITRIC OXIDE (PPM)	0.009	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.015	24
10--METHANE (PPMC)	1.717	24
11--NON-METHANE HYDROCARBON (PPMC)	0.321	24
12--CARBON MONOXIDE (PPM)	0.322	24
19--FLUOROCARBON-11 (PPT)	171.	24
20--CARBON TETRACHLORIDE (PPT)	129.	24

TABLE 20b.

HOUR AVERAGES FOR AUGUST 1, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.050	0.450	1.275	2.800	4.225	5.350	6.000
2--WIND SPEED (MPH)	0.900	0.400	0.800	1.100	0.800	0.300	0.700	1.000	2.100	3.000	4.500	4.000
3--WIND DIRECTION (DEGREES)	285.	240.	332.	320.	319.	317.	226.	246.	336.	344.	4.	344.
4--TEMPERATURE (CENTIGRADE)	23.	23.	22.	22.	21.	21.	21.	24.	27.	31.	32.	34.
5--RELATIVE HUMIDITY (PERCENT)	93.	94.	95.	95.	96.	97.	94.	87.	71.	55.	50.	46.
6--OZONE (PPM)	.000	.000	.000	.000	.000	.000	.000	0.001	0.018	0.042	0.060	0.065
7--NITRIC OXIDE (PPM)	0.012	0.011	0.012	0.009	0.008	0.008	0.012	0.019	0.007	0.007	0.004	0.005
8--NITROGEN DIOXIDE (PPM)	0.010	0.007	0.006	0.006	0.005	0.004	0.003	0.008	0.008	0.005	0.003	0.002
9--NITROGEN OXIDES (PPM)	0.022	0.018	0.018	0.014	0.012	0.012	0.015	0.027	0.015	0.012	0.007	0.007
10--METHANE (PPMC)	1.584	2.129	2.106	1.581	1.596	1.778	3.859	2.235	1.506	1.446	1.438	1.395
11--NON-METHANE HYDROCARBON (PPMC)	0.335	0.537	0.244	0.254	0.443	0.340	0.552	0.305	0.180	0.157	0.132	0.140
12--CARBON MONOXIDE (PPM)	0.462	0.487	0.475	0.437	0.387	0.350	0.425	0.650	0.525	0.275	0.150	0.125
19--FLUOROCARBON-11 (PPT)	201.	229.	190.	184.	178.	159.	280.	188.	155.	140.	130.	134.
20--CARBON TETRACHLORIDE (PPT)	130.	115.	128.	120.	90.	110.	120.	135.	130.	125.	150.	140.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.550	6.700	6.050	5.325	3.475	2.850	1.400	0.375	0.050	.000	.000	.000
2--WIND SPEED (MPH)	3.400	3.500	3.400	3.700	1.700	1.800	2.300	0.700	0.900	1.000	2.900	2.300
3--WIND DIRECTION (DEGREES)	350.	316.	346.	24.	308.	271.	308.	271.	251.	195.	196.	208.
4--TEMPERATURE (CENTIGRADE)	35.	37.	38.	37.	38.	37.	35.	32.	28.	27.	25.	25.
5--RELATIVE HUMIDITY (PERCENT)	42.	37.	35.	35.	36.	37.	45.	59.	79.	84.	87.	86.
6--OZONE (PPM)	0.069	0.067	0.055	0.057	0.053	0.050	0.053	0.033	0.009	.000	0.000	0.005
7--NITRIC OXIDE (PPM)	0.005	0.006	0.006	0.006	0.010	0.011	0.010	0.011	0.009	0.012	0.009	0.007
8--NITROGEN DIOXIDE (PPM)	0.000	0.003	0.002	0.001	0.002	0.003	0.003	0.005	0.005	0.015	0.018	0.015
9--NITROGEN OXIDES (PPM)	0.005	0.009	0.008	0.007	0.012	0.014	0.013	0.016	0.014	0.027	0.027	0.022
10--METHANE (PPMC)	1.366	1.361	1.351	1.333	1.321	1.298	1.266	1.268	1.620	2.793	2.221	1.348
11--NON-METHANE HYDROCARBON (PPMC)	0.186	0.220	0.250	0.227	0.245	0.288	0.403	0.413	0.415	0.615	0.458	0.373
12--CARBON MONOXIDE (PPM)	0.087	0.175	0.100	0.100	0.162	0.137	0.225	0.225	0.162	0.512	0.563	0.537
19--FLUOROCARBON-11 (PPT)	133.	136.	130.	126.	133.	138.	144.	151.	153.	262.	246.	194.
20--CARBON TETRACHLORIDE (PPT)	135.	120.	112.	135.	115.	110.	135.	135.	125.	165.	158.	160.

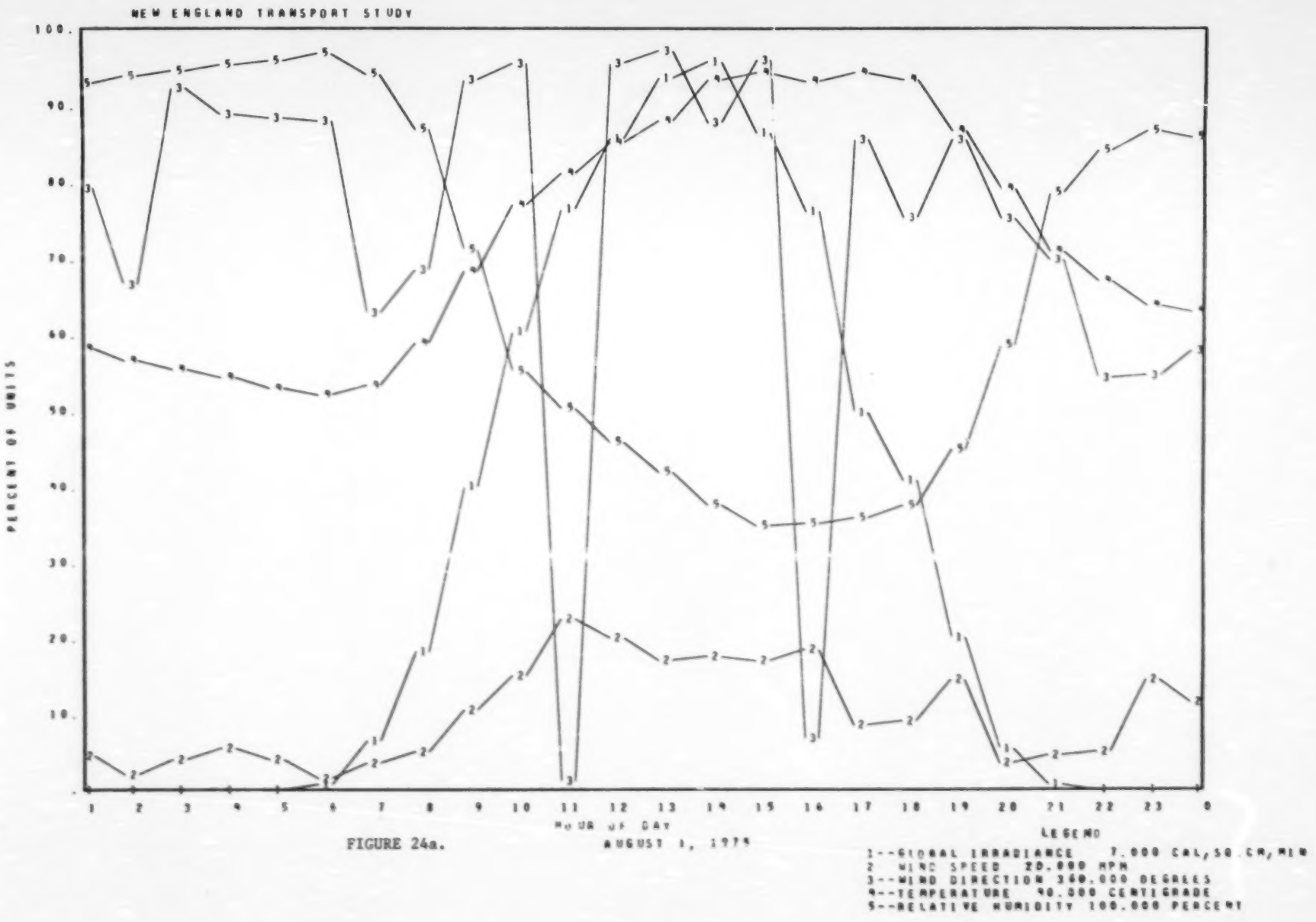

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 1, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 24a.

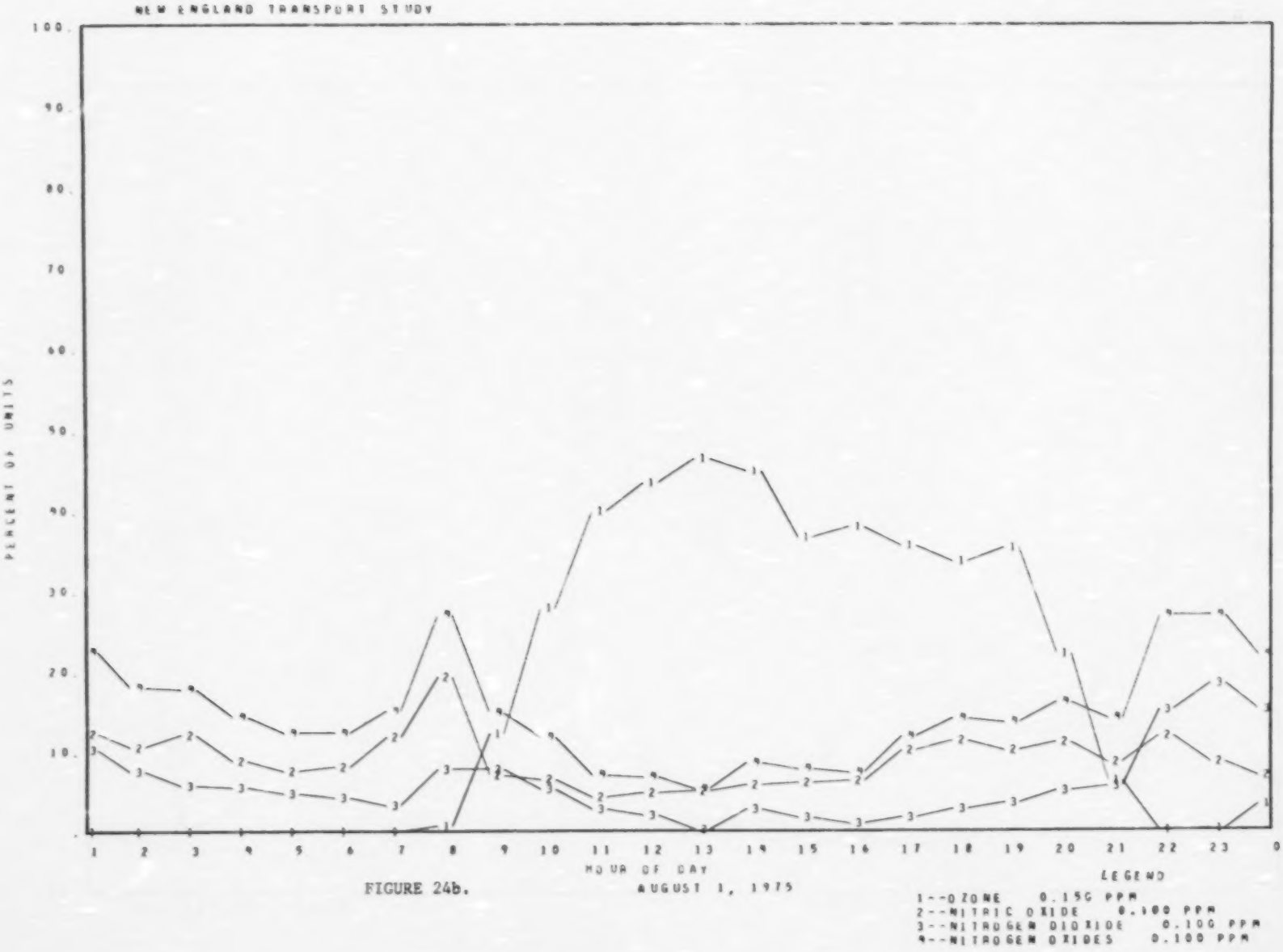
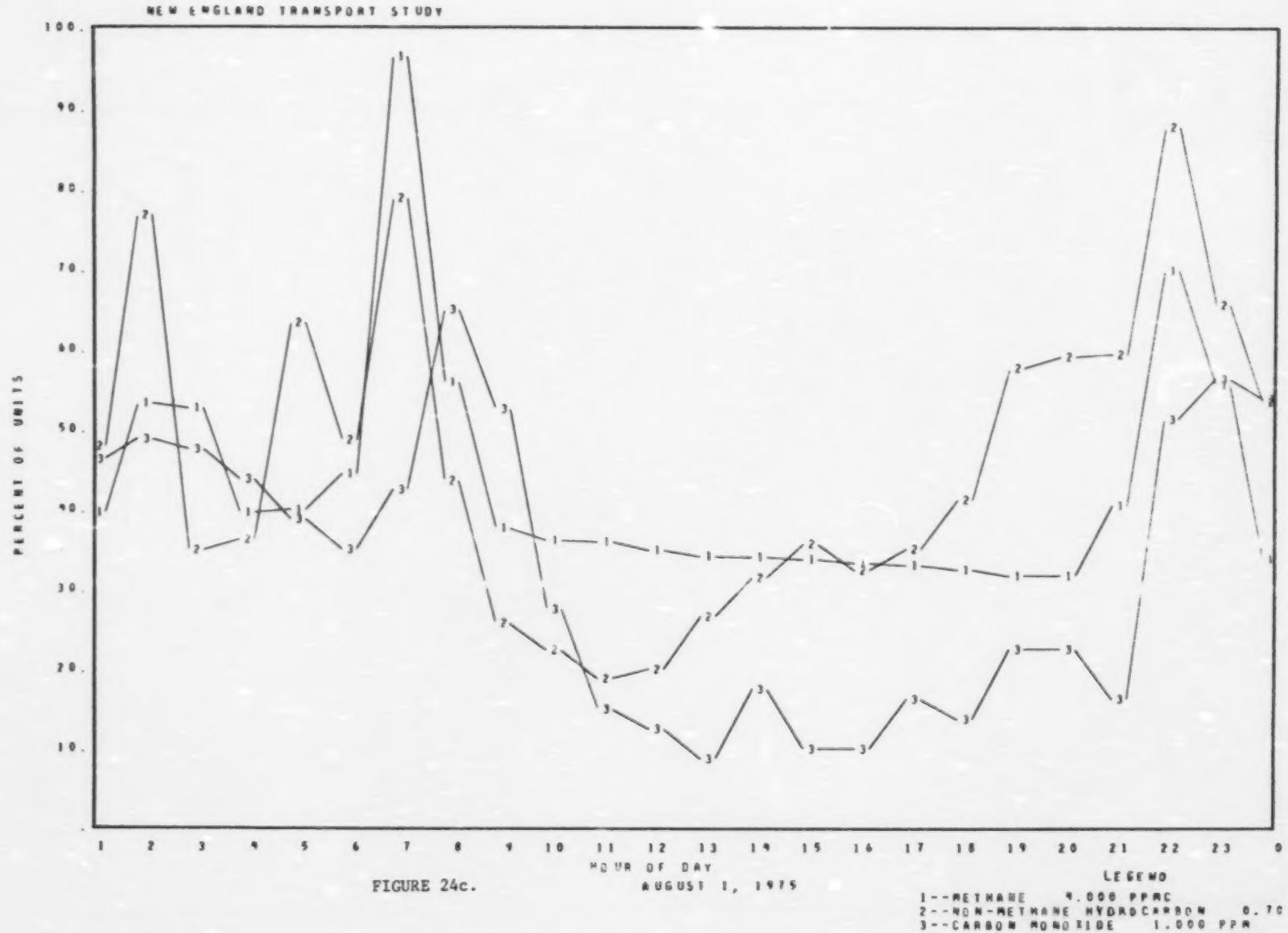

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 1, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 24b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 1, 1975
LEGEND
1--METHANE 4.000 PPMC
2--NON-METHANE HYDROCARBON 0.70 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 24c.

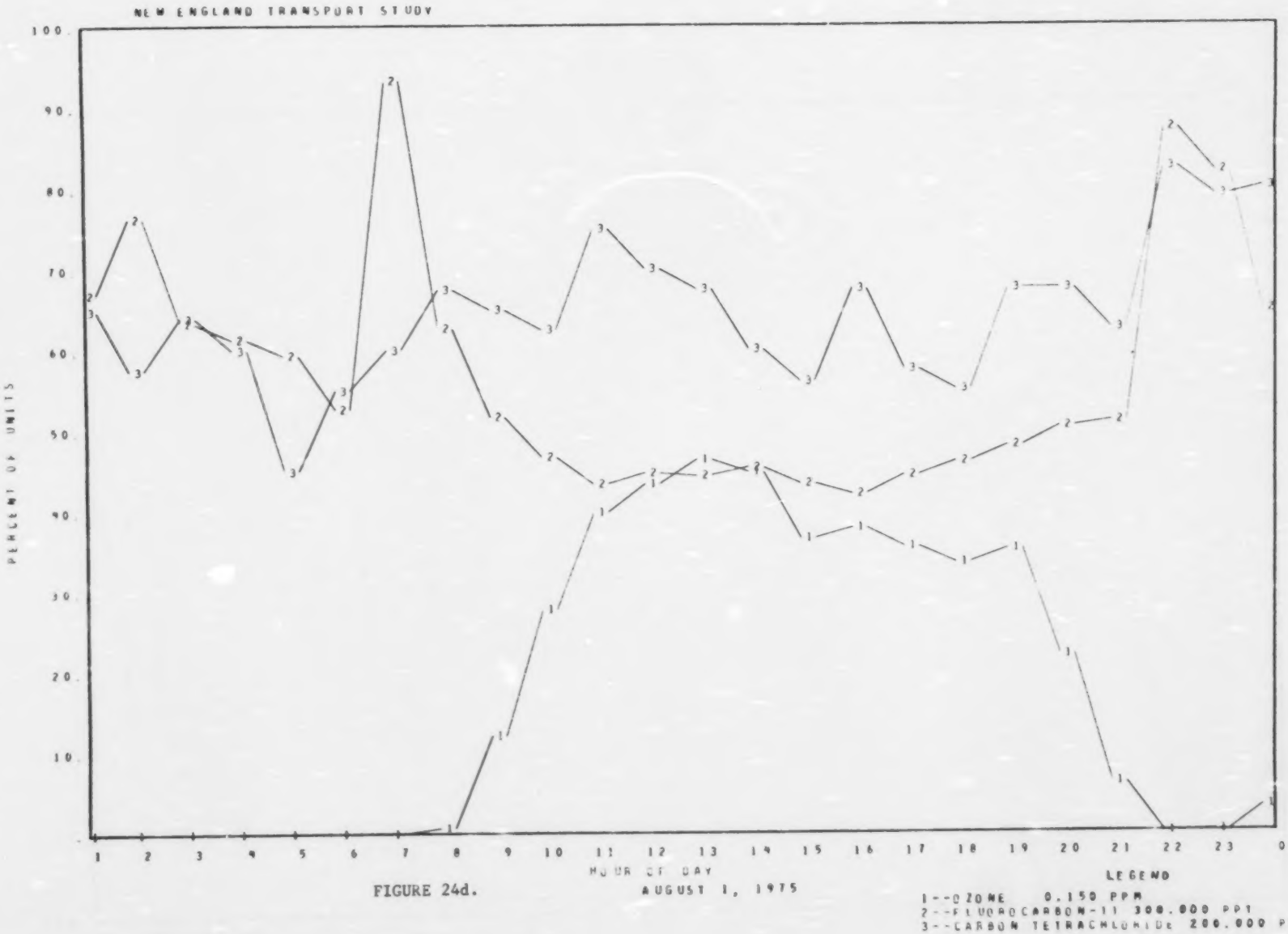
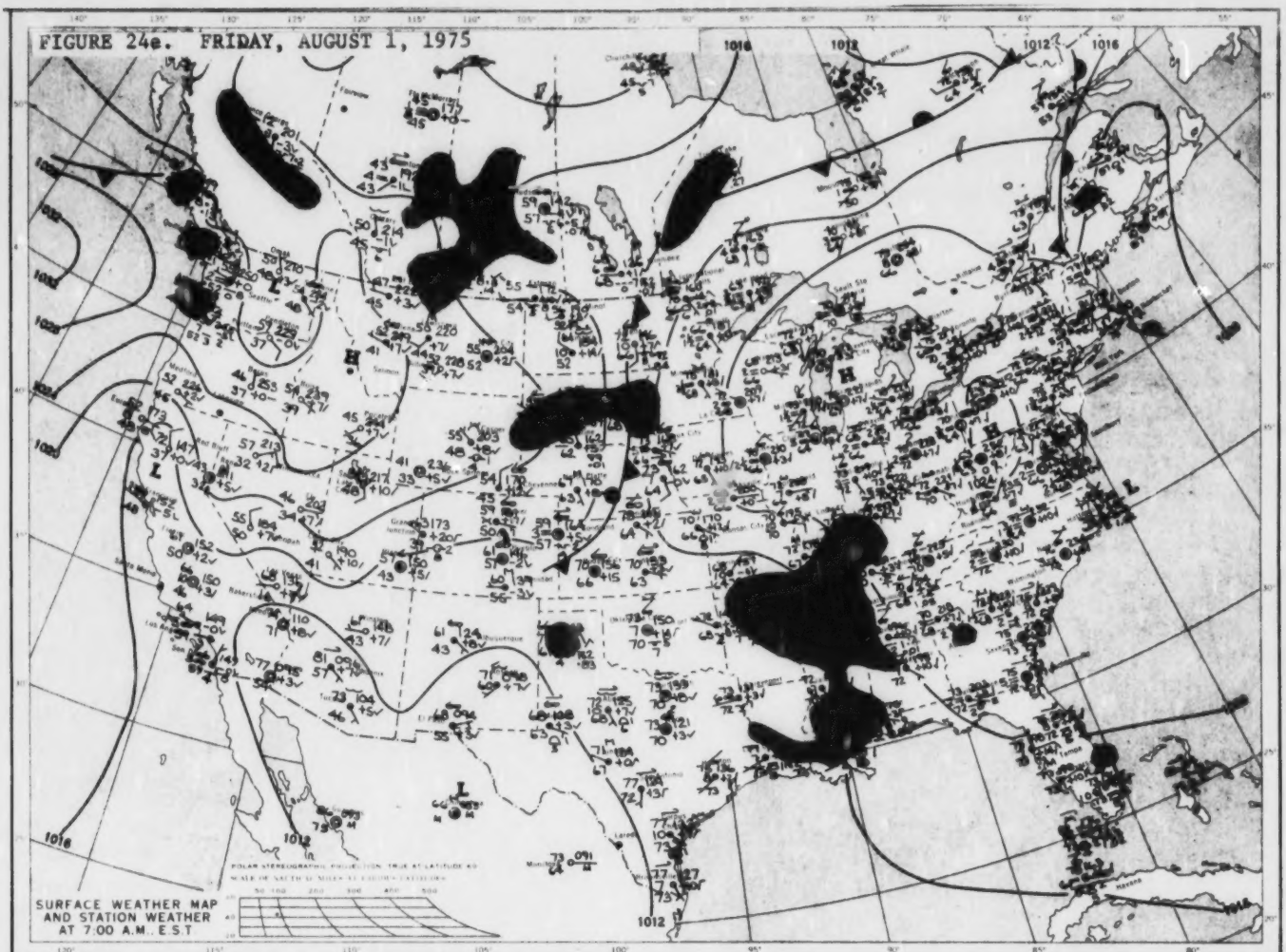

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 1, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 24d.

FIGURE 24e. FRIDAY, AUGUST 1, 1975



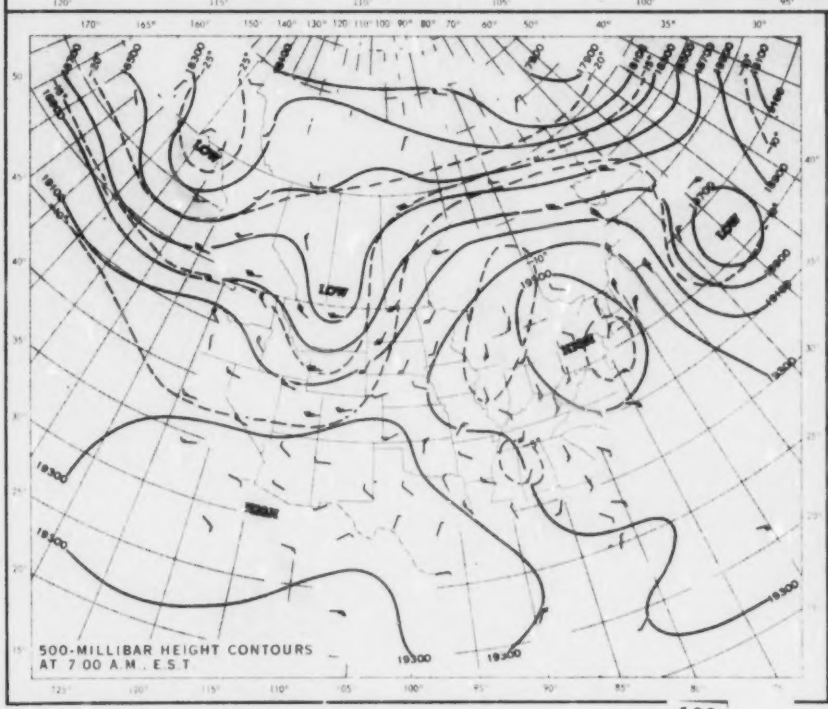


TABLE 21a. AUGUST 2, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.376	24
2--WIND SPEED (MPH)	2.079	24
3--WIND DIRECTION (DEGREES)	271.095	24
4--TEMPERATURE (CENTIGRADE)	29.743	24
5--RELATIVE HUMIDITY (PERCENT)	65.862	24
6--OZONE (PPM)	0.031	24
7--NITRIC OXIDE (PPM)	0.007	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.013	24
10--METHANE (PPMC)	1.083	21
11--NON-METHANE HYDROCARBON (PPMC)	0.970	21
12--CARBON MONOXIDE (PPM)	0.245	24
19--FLUOROCARBON-11 (PPT)	173.	22
20--CARBON TETRACHLORIDE (PPT)	131.	22

TABLE 21b.

HOUR AVERAGES FOR AUGUST 2, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.001	0.100	0.675	2.000	3.350	4.600	5.600	6.350
2--WIND SPEED (MPH)	1.400	0.600	1.100	0.800	0.300	0.900	0.800	1.000	2.600	4.100	3.100	5.500
3--WIND DIRECTION (DEGREES)	239.	315.	264.	254.	245.	333.	326.	223.	337.	358.	350.	358.
4--TEMPERATURE (CENTIGRADE)	24.	23.	23.	22.	22.	21.	22.	26.	30.	32.	34.	36.
5--RELATIVE HUMIDITY (PERCENT)	89.	92.	94.	95.	95.	95.	89.	73.	59.	54.	49.	44.
6--OZONE (PPM)	.000	.000	.000	.000	.000	.000	.000	0.008	0.028	0.041	0.054	0.053
7--NITRIC OXIDE (PPM)	0.007	0.007	0.006	0.005	0.007	0.008	0.011	0.007	0.007	0.004	0.005	0.005
8--NITROGEN DIOXIDE (PPM)	0.013	0.009	0.008	0.007	0.005	0.004	0.004	0.004	0.003	0.003	0.003	0.003
9--NITROGEN OXIDES (PPM)	0.020	0.016	0.014	0.012	0.012	0.011	0.014	0.011	0.010	0.007	0.008	0.008
10--METHANE (PPMC)	1.000	1.380	0.900	0.952	1.475	1.215	1.110	1.393	0.836	0.839	0.896	0.888
11--NON-METHANE HYDROCARBON (PPMC)	0.948	1.018	0.946	0.876	1.054	0.971	0.971	1.238	0.842	0.733	0.832	0.875
12--CARBON MONOXIDE (PPM)	0.512	0.387	0.400	0.313	0.337	0.387	0.425	0.313	0.300	0.250	0.225	0.200
19--FLUOROCARBON-11 (PPT)	191.	193.	182.	183.	179.	173.	198.	195.	136.	132.	-139.	-147.
20--CARBON TETRACHLORIDE (PPT)	155.	140.	150.	160.	115.	115.	128.	115.	145.	125.	-138.	-152.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.750	6.675	6.175	5.625	4.400	3.125	1.200	0.350	0.050	.000	.000	.000
2--WIND SPEED (MPH)	4.200	3.600	2.900	3.600	3.000	3.400	2.200	1.300	0.700	1.000	1.100	0.700
3--WIND DIRECTION (DEGREES)	18.	358.	248.	215.	258.	268.	273.	215.	194.	336.	193.	325.
4--TEMPERATURE (CENTIGRADE)	37.	39.	40.	41.	39.	37.	34.	31.	28.	26.	24.	24.
5--RELATIVE HUMIDITY (PERCENT)	42.	38.	38.	36.	35.	41.	44.	53.	67.	81.	88.	90.
6--OZONE (PPM)	0.056	0.067	0.067	0.062	0.064	0.077	0.077	0.056	0.030	0.005	.000	.000
7--NITRIC OXIDE (PPM)	0.006	0.007	0.009	0.010	0.009	0.010	0.010	0.008	0.008	0.006	0.009	0.012
8--NITROGEN DIOXIDE (PPM)	0.002	0.001	0.002	0.002	0.002	0.003	0.002	0.004	0.006	0.009	0.010	0.011
9--NITROGEN OXIDES (PPM)	0.008	0.008	0.012	0.011	0.011	0.013	0.012	0.012	0.014	0.015	0.019	0.024
10--METHANE (PPMC)	0.820	0.785	0.805	0.773	-0.782	-0.791	-0.800	0.810	0.913	0.980	1.991	1.915
11--NON-METHANE HYDROCARBON (PPMC)	0.873	0.870	0.983	1.020	-0.978	-0.937	-0.895	0.853	0.923	0.903	1.267	1.370
12--CARBON MONOXIDE (PPM)	0.087	0.087	0.137	0.112	0.062	0.050	0.075	0.087	0.150	0.188	0.350	0.450
19--FLUOROCARBON-11 (PPT)	154.	155.	167.	159.	142.	152.	150.	138.	143.	195.	232.	252.
20--CARBON TETRACHLORIDE (PPT)	165.	155.	150.	130.	100.	120.	90.	105.	115.	145.	120.	145.

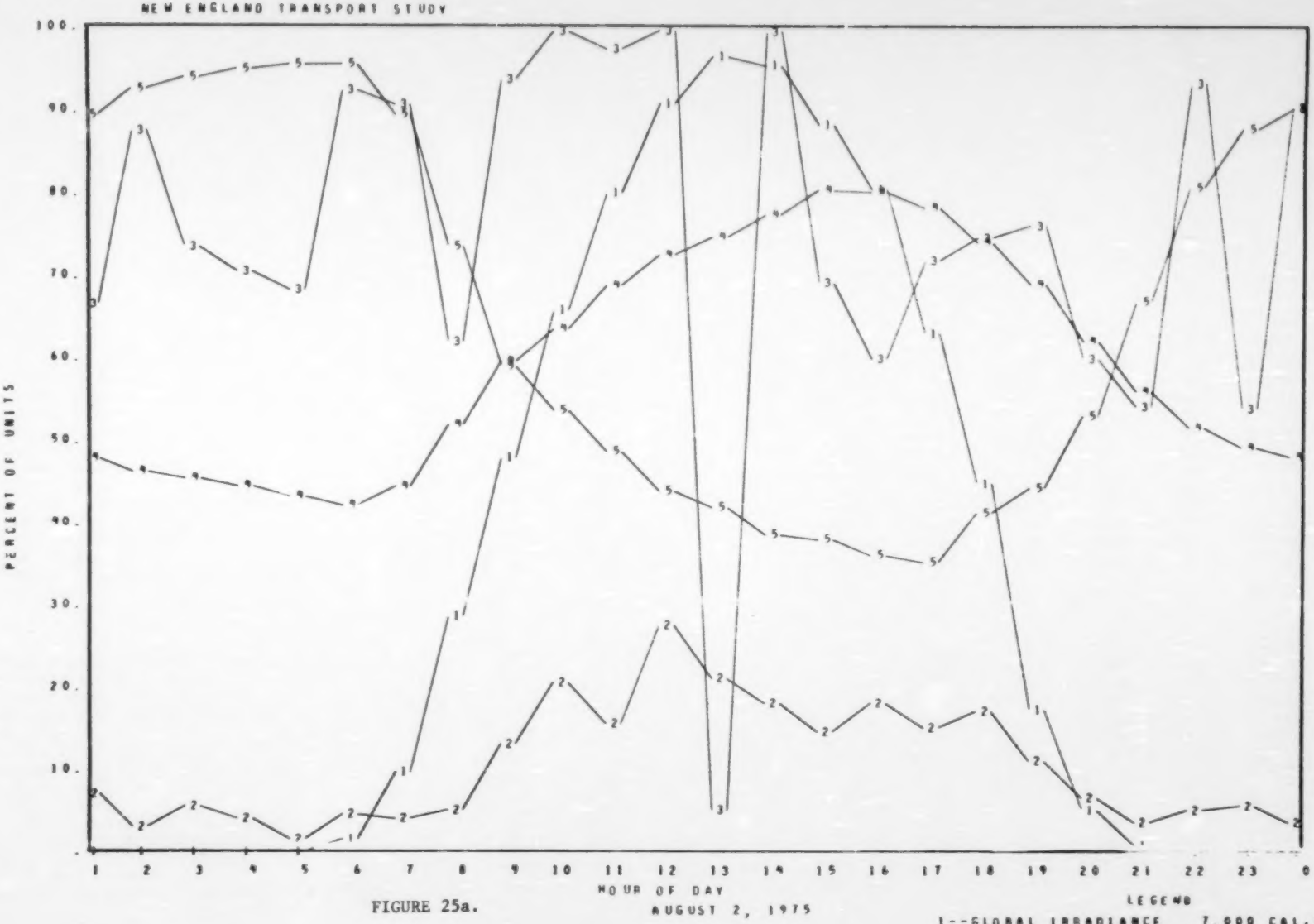

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 2, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 50.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 25a.

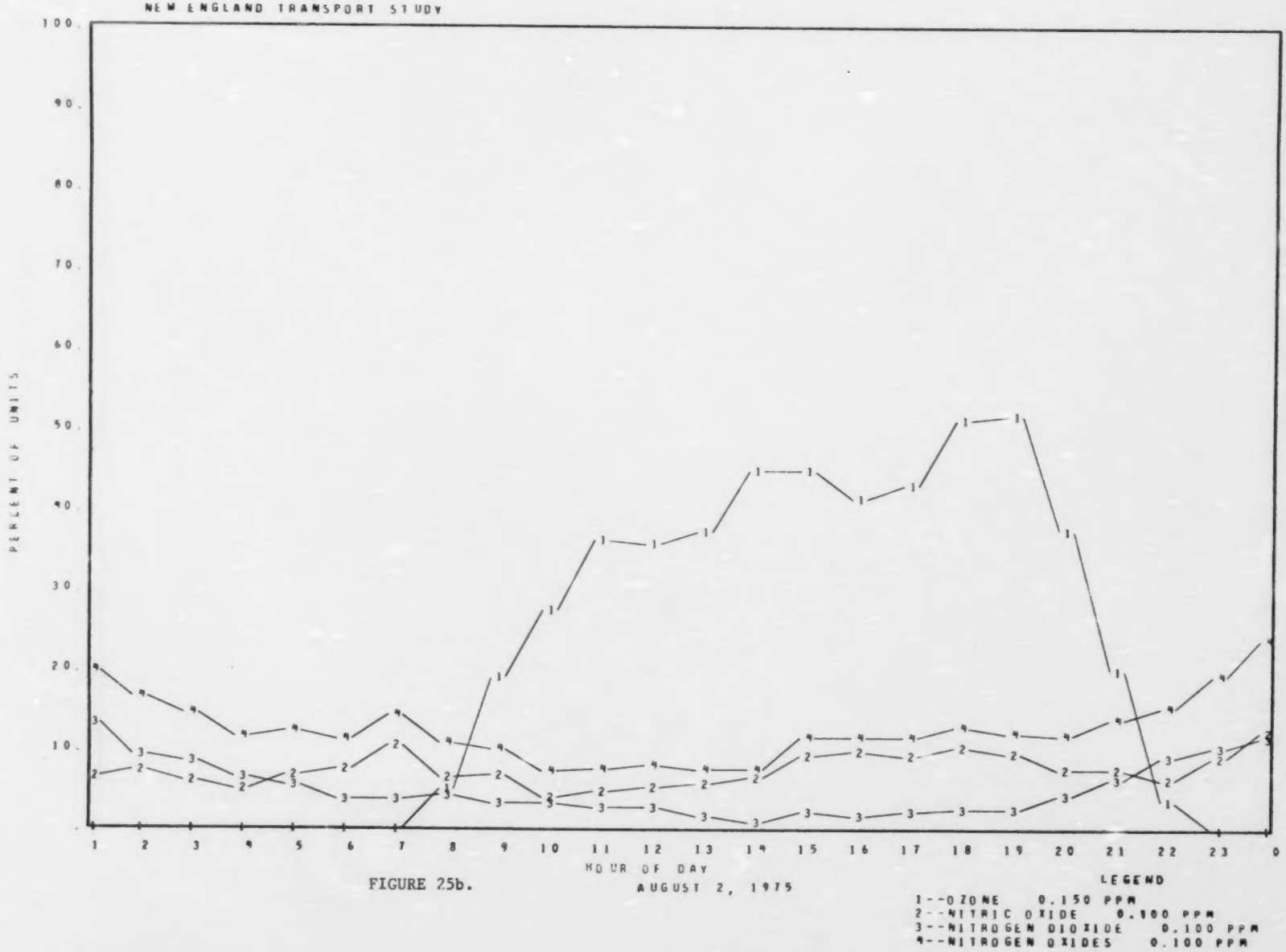

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 2, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 25b.

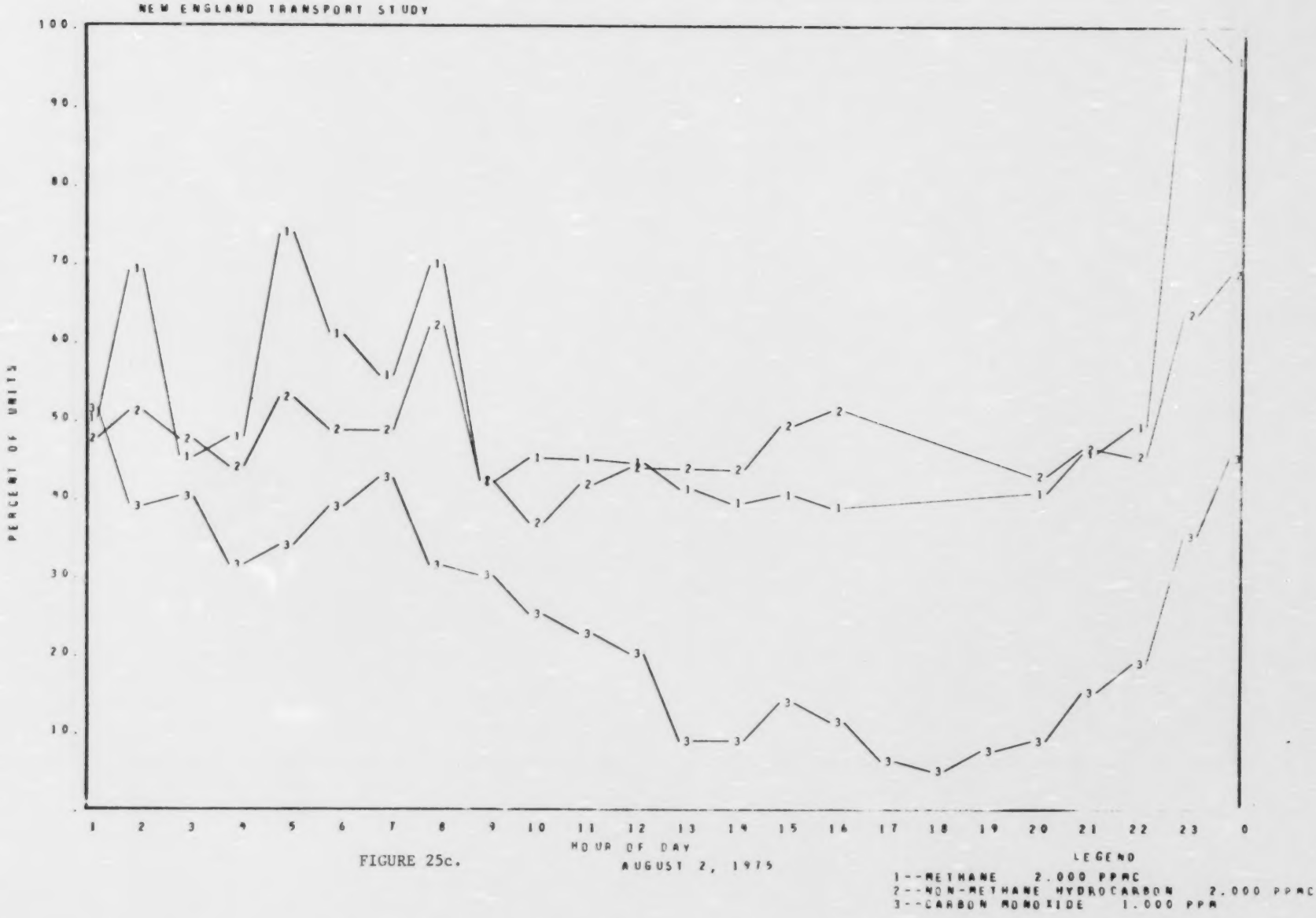

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 2, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 25c.

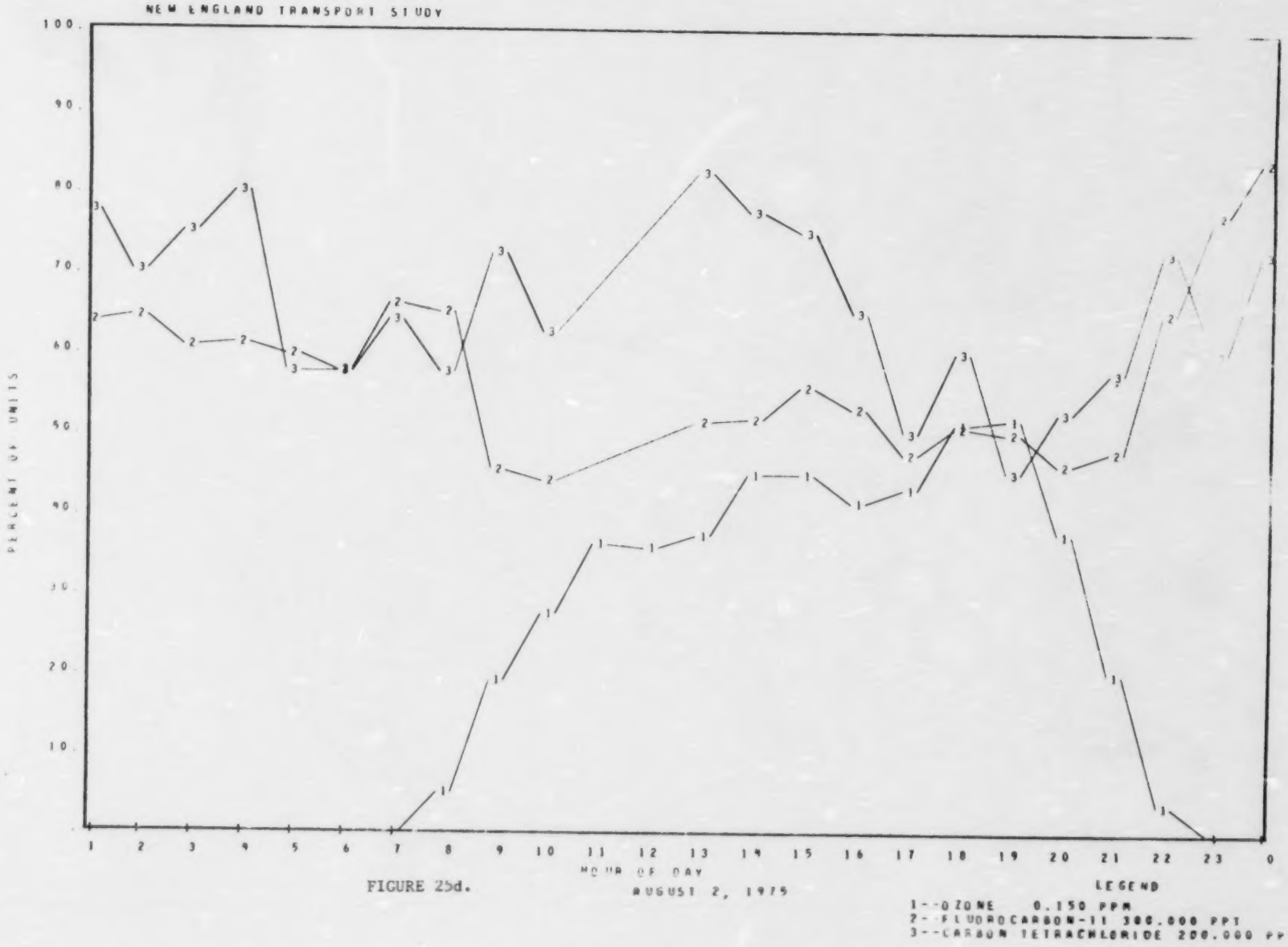
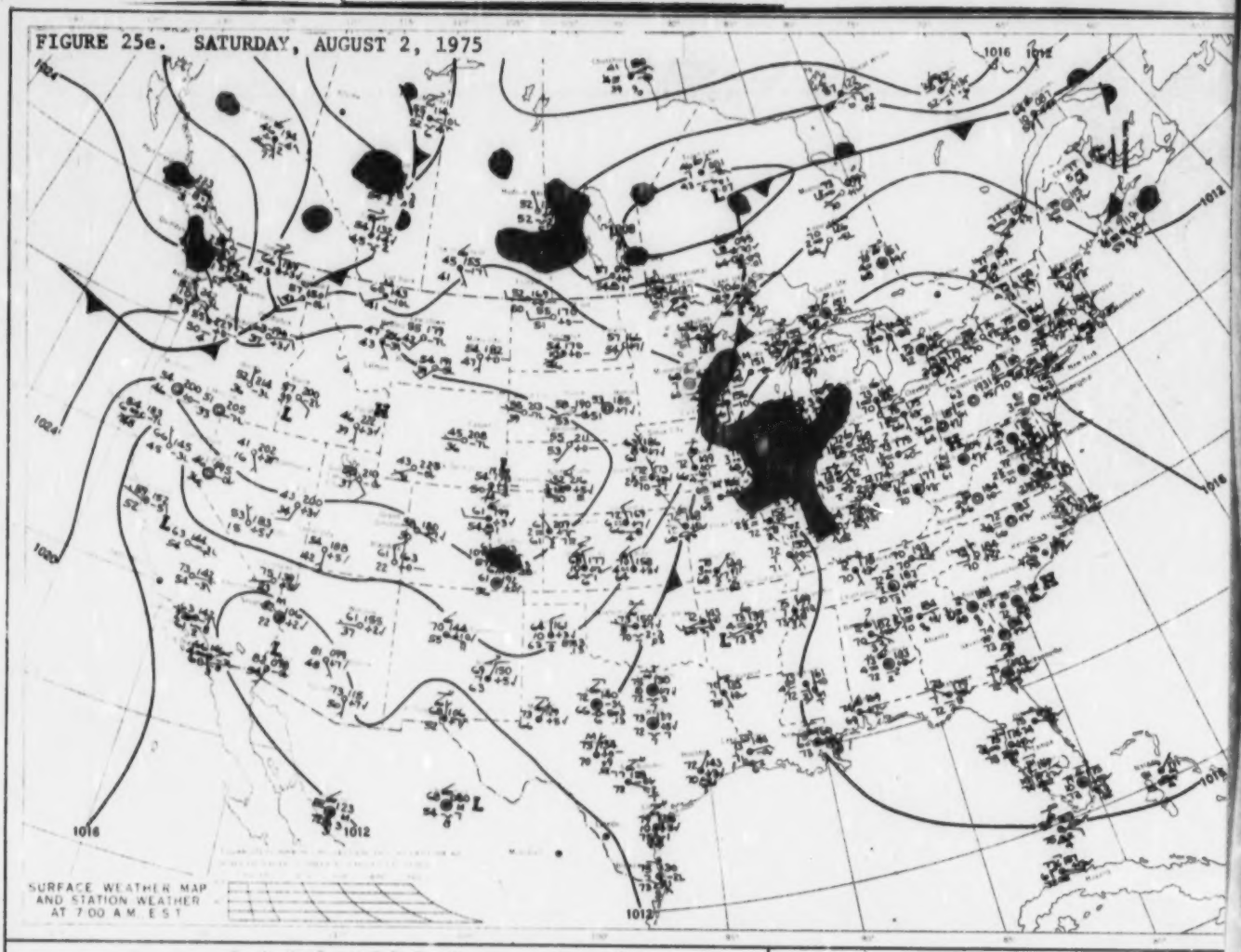

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 2, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 25d.

FIGURE 25e. SATURDAY, AUGUST 2, 1975



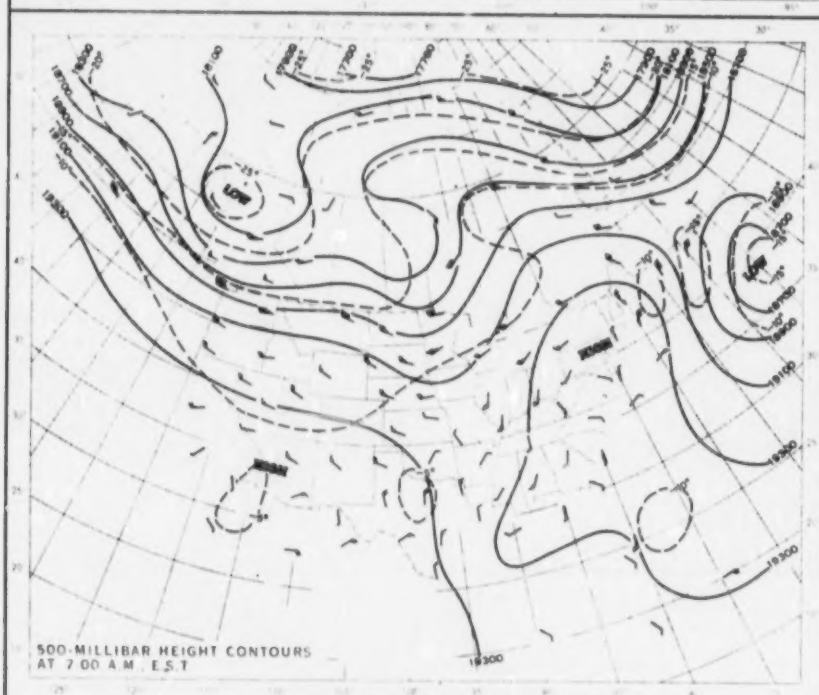


TABLE 22a. AUGUST 3, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.196	24
2--WIND SPEED (MPH)	3.437	24
3--WIND DIRECTION (DEGREES)	225.394	24
4--TEMPERATURE (CENTIGRADE)	28.434	24
5--RELATIVE HUMIDITY (PERCENT)	70.405	24
6--OZONE (PPM)	0.036	24
7--NITRIC OXIDE (PPM)	0.004	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.108	23
11--NON-METHANE HYDROCARBON (PPMC)	0.867	23
12--CARBON MONOXIDE (PPM)	0.149	10
19--FLUOROCARBON-11 (PPT)	162.	24
20--CARBON TETRACHLORIDE (PPT)	108.	24

TABLE 22b.

HOUR AVERAGES FOR AUGUST 3, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.550	1.825	3.050	4.050	5.425	6.075
2--WIND SPEED (MPH)	2.200	1.900	1.100	1.100	1.000	1.400	1.200	1.300	1.800	1.900	4.100	5.700
3--WIND DIRECTION (DEGREES)	215.	215.	323.	276.	333.	321.	2.	212.	169.	223.	331.	359.
4--TEMPERATURE (CENTIGRADE)	24.	24.	23.	22.	21.	21.	21.	24.	29.	32.	34.	35.
5--RELATIVE HUMIDITY (PERCENT)	91.	92.	93.	94.	95.	96.	93.	82.	65.	55.	48.	45.
6--OZONE (PPM)	.000	0.000	.000	.000	.000	.000	.000	0.001	0.028	0.039	0.041	0.051
7--NITRIC OXIDE (PPM)	0.017	0.009	0.008	0.006	0.007	0.005	0.009	0.005	0.003	0.002	0.003	0.003
8--NITROGEN DIOXIDE (PPM)	0.013	0.013	0.010	0.008	0.006	0.005	0.004	0.003	0.001	0.002	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.030	0.022	0.018	0.014	0.013	0.010	0.013	0.007	0.004	0.004	0.004	0.004
10--METHANE (PPMC)	2.046	1.863	1.315	1.410	1.196	1.184	1.150	1.198	1.198	1.068	1.026	0.911
11--NON-METHANE HYDROCARBON (PPMC)	1.205	1.223	1.133	0.963	0.998	0.848	1.067	0.795	0.690	0.582	0.607	0.741
12--CARBON MONOXIDE (PPM)	0.525	-0.497	-0.468	-0.440	-0.412	-0.383	-0.355	-0.327	-0.298	-0.270	-0.242	-0.21
19--FLUOROCARBON-11 (PPT)	225.	182.	192.	180.	175.	174.	174.	184.	138.	128.	135.	152.
20--CARBON TETRACHLORIDE (PPT)	120.	128.	110.	95.	100.	82.	95.	145.	105.	105.	105.	100.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.250	6.425	6.025	5.275	3.425	2.025	1.675	0.525	0.075	.000	.000	.000
2--WIND SPEED (MPH)	4.800	4.200	4.200	3.200	2.900	4.500	3.300	5.300	10.400	5.100	[illegible]	[illegible]
3--WIND DIRECTION (DEGREES)	15.	8.	55.	274.	356.	204.	86.	80.	343.	340.	[illegible]	[illegible]
4--TEMPERATURE (CENTIGRADE)	35.	37.	36.	38.	37.	35.	34.	31.	25.	23.	[illegible]	23.
5--RELATIVE HUMIDITY (PERCENT)	43.	40.	41.	40.	41.	46.	51.	56.	83.	100.	100.	100.
6--OZONE (PPM)	0.058	0.060	0.061	0.060	0.062	0.089	0.067	0.075	0.068	0.041	0.029	0.032
7--NITRIC OXIDE (PPM)	0.003	0.004	0.005	0.003	0.002	0.002	0.002	0.001	0.000	0.000	.000	0.001
8--NITROGEN DIOXIDE (PPM)	0.001	0.001	0.000	0.002	0.001	0.003	0.002	0.004	0.003	0.002	0.003	0.003
9--NITROGEN OXIDES (PPM)	0.004	0.005	0.006	0.005	0.003	0.005	0.004	0.005	0.003	0.002	0.003	0.004
10--METHANE (PPMC)	0.787	0.781	-0.785	0.790	0.860	0.936	0.954	0.931	1.025	0.945	0.929	0.978
11--NON-METHANE HYDROCARBON (PPMC)	0.861	0.872	-0.941	1.010	0.913	0.770	0.702	0.794	0.720	0.913	0.823	0.707
12--CARBON MONOXIDE (PPM)	-0.185	-0.157	-0.128	0.100	0.087	0.112	0.125	0.138	0.087	0.075	0.075	0.162
19--FLUOROCARBON-11 (PPT)	148.	154.	167.	160.	153.	180.	175.	188.	146.	118.	120.	137.
20--CARBON TETRACHLORIDE (PPT)	120.	105.	130.	110.	120.	120.	115.	125.	65.	90.	90.	120.

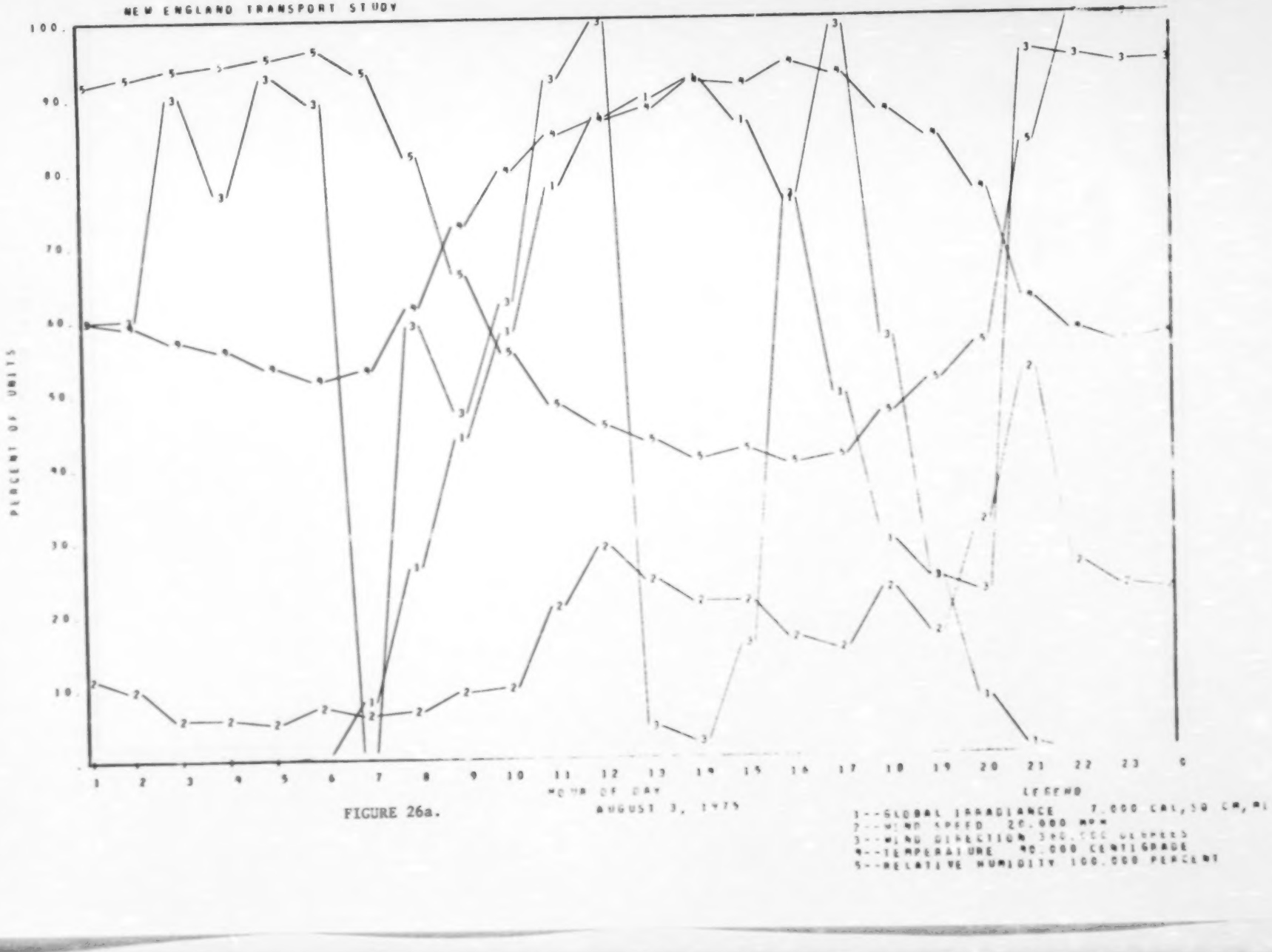

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 3, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ CM/MI
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 26a.

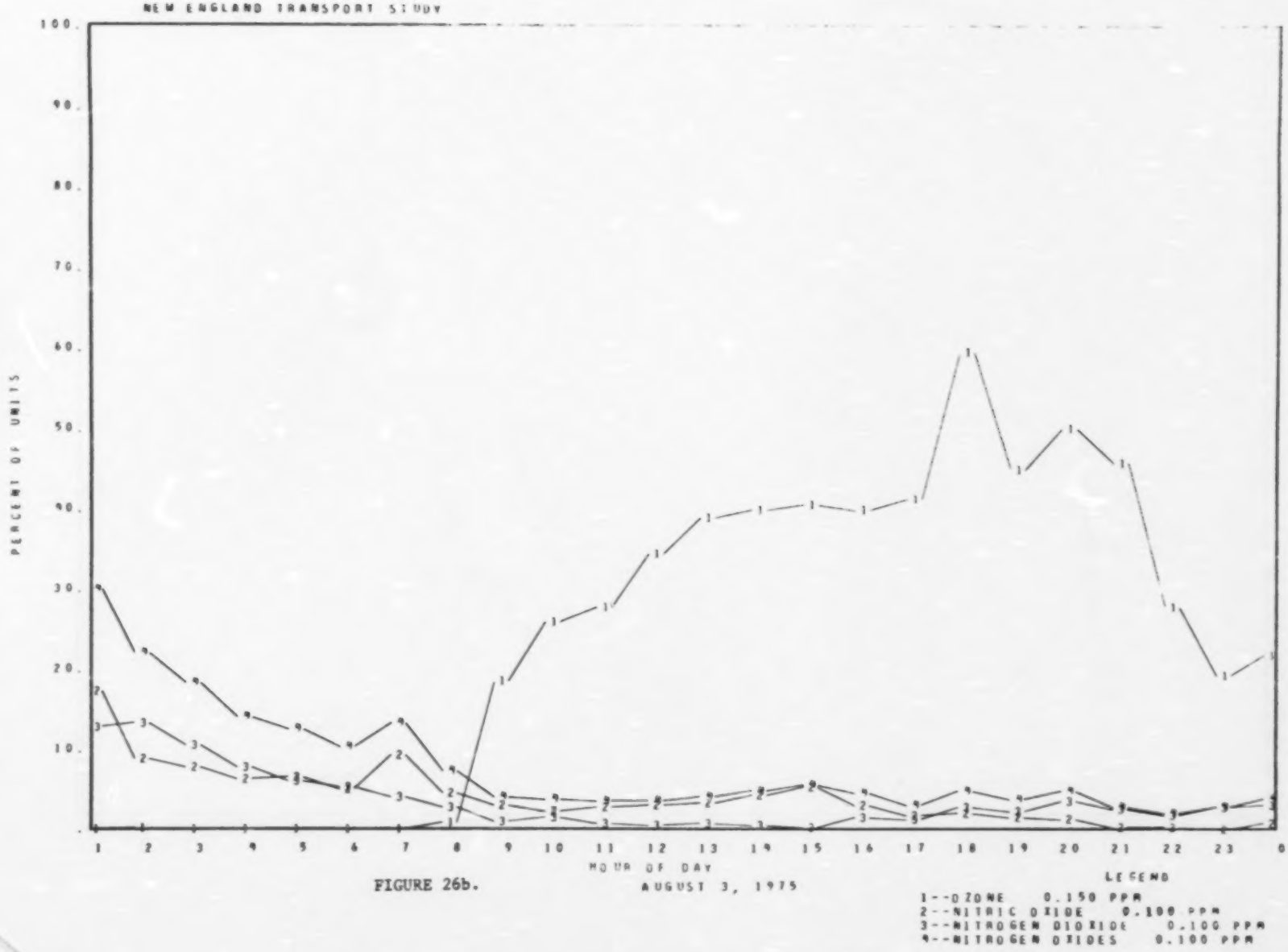

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 3, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 26b.

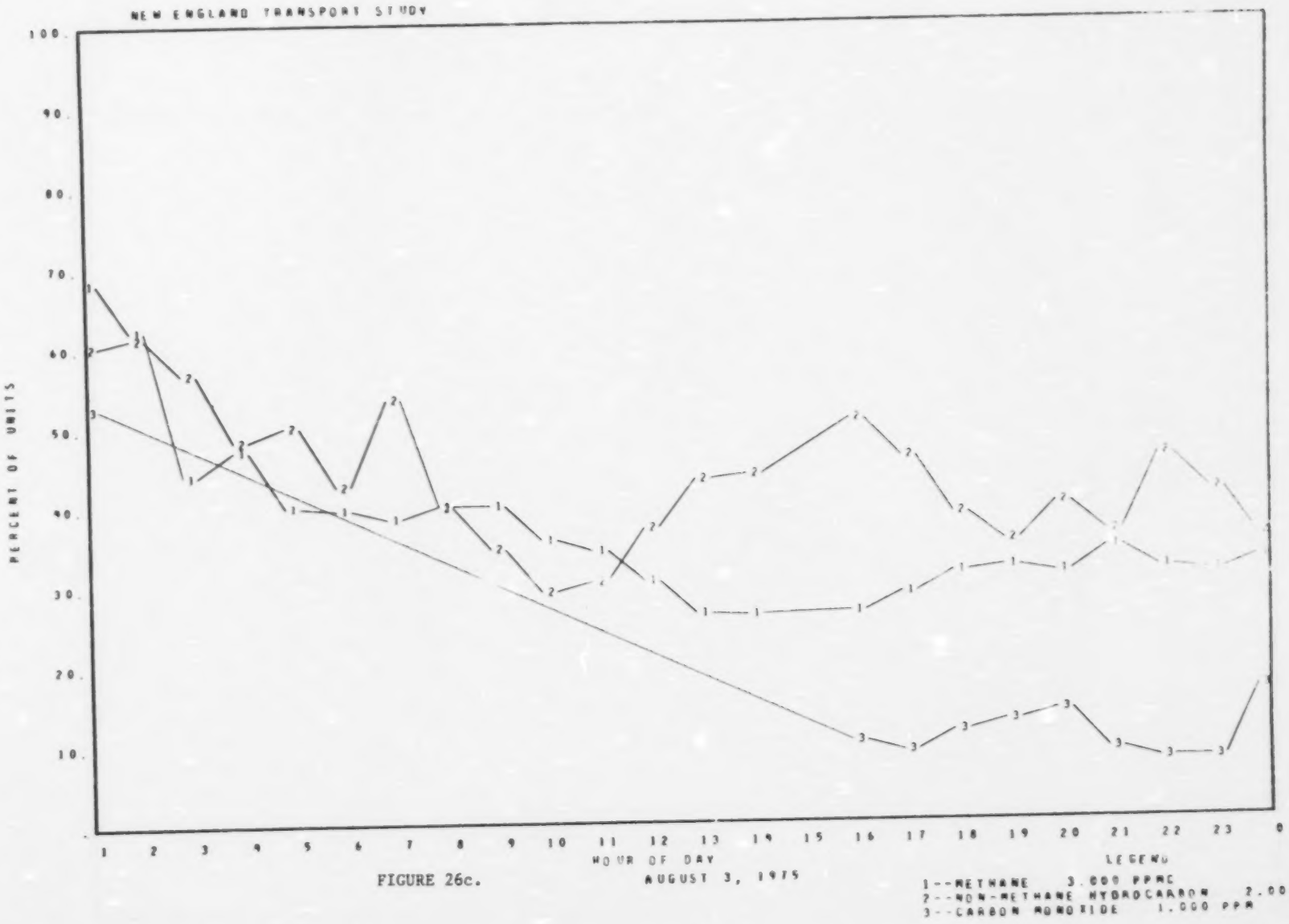

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 3, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 26c.

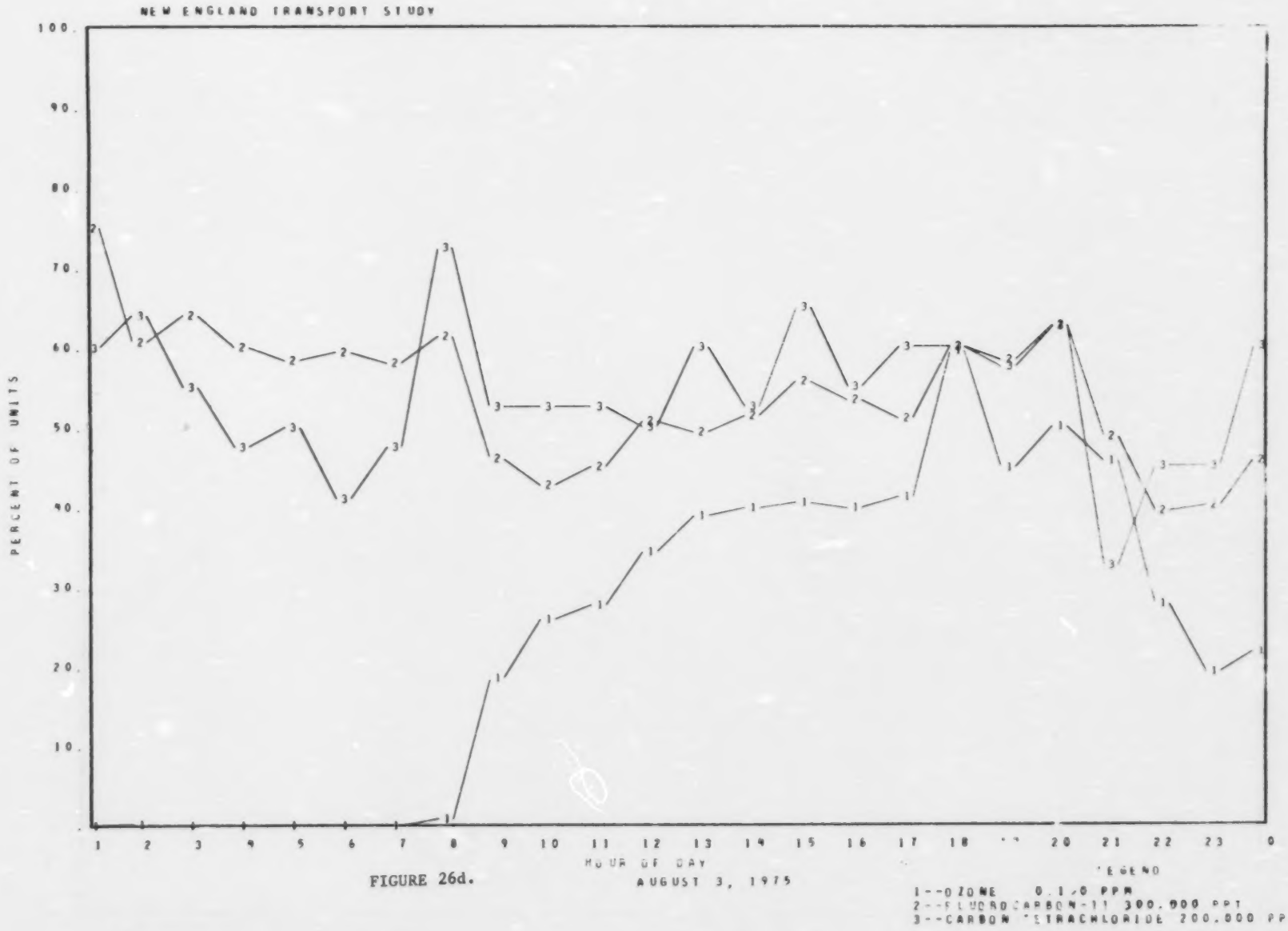
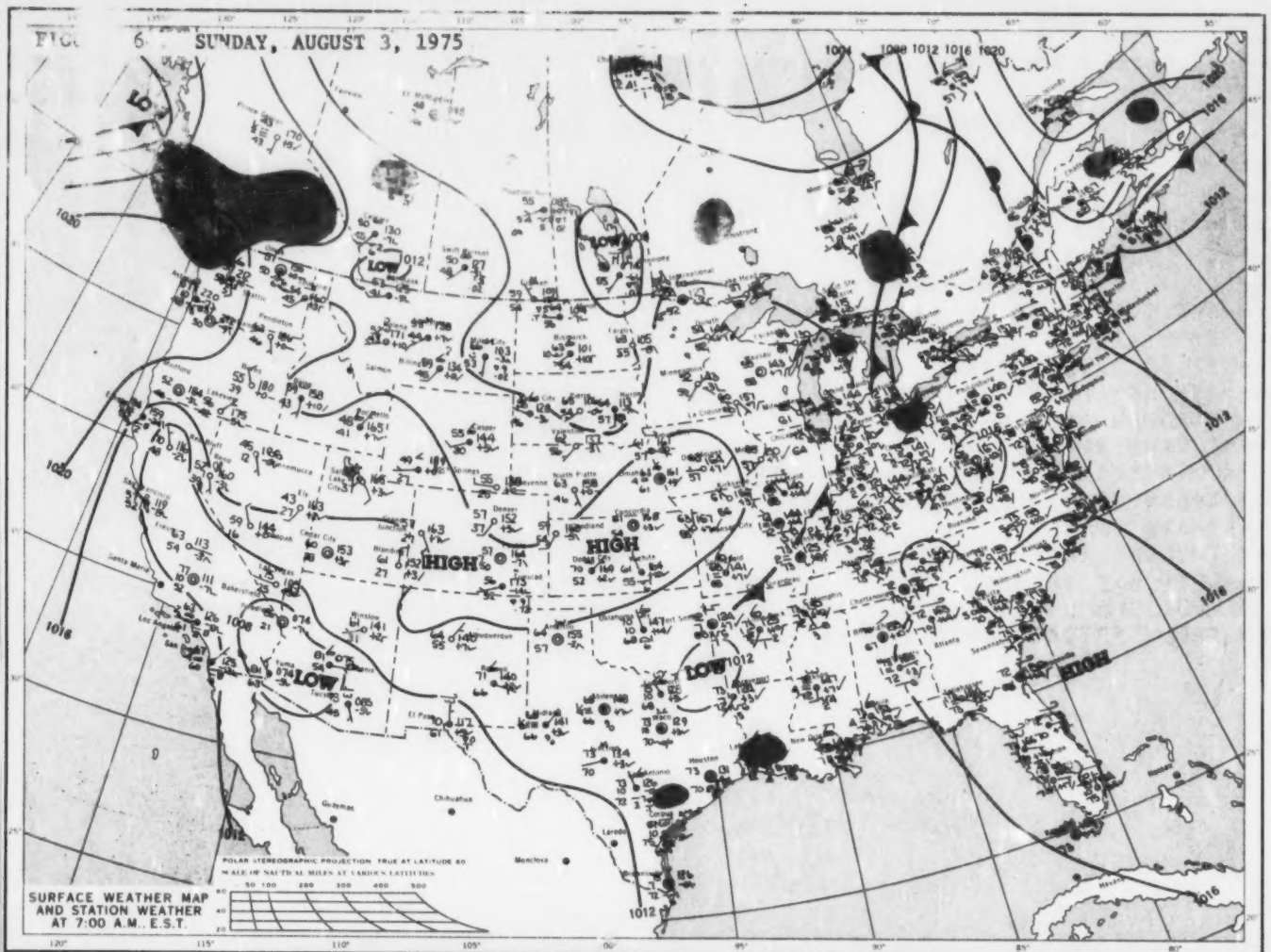
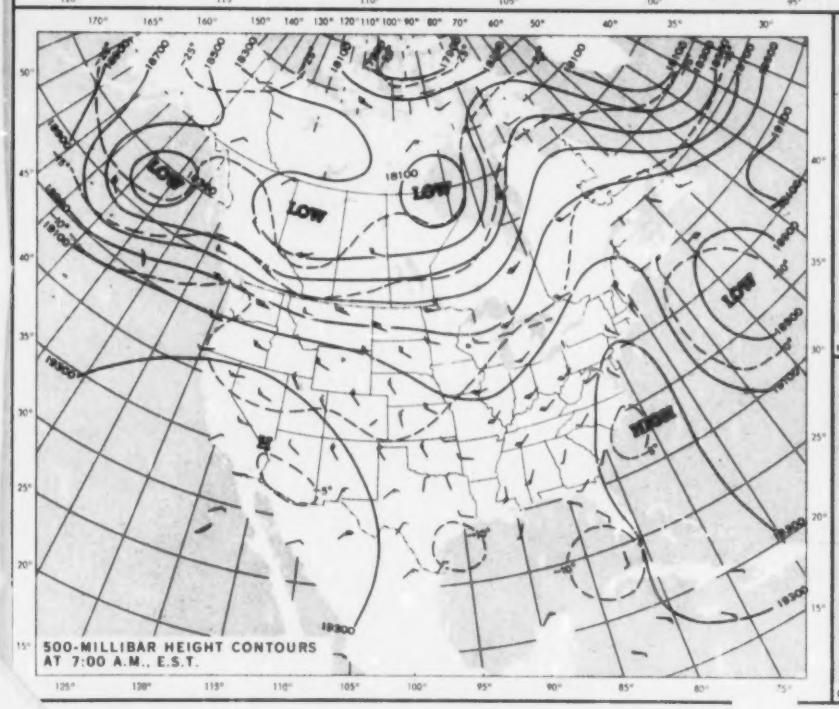

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 3, 1975
LEGEND
1--OZONE 0.120 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 26d.

FIG. 6 SUNDAY, AUGUST 3, 1975



SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.

HIGHEST AND LOWEST TEMPERATURES

PRECIPITATION AREAS AND AMOUNTS

TABLE 23a. AUGUST 4, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.334	24
2--WIND SPEED (MPH)	3.208	24
3--WIND DIRECTION (DEGREES)	134.880	24
4--TEMPERATURE (CENTIGRADE)	22.702	24
5--RELATIVE HUMIDITY (PERCENT)	92.025	24
6--OZONE (PPM)	0.021	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.007	24
9--NITROGEN OXIDES (PPM)	0.009	24
10--METHANE (PPMC)	1.626	24
11--NON-METHANE HYDROCARBON (PPMC)	0.078	5
12--CARBON MONOXIDE (PPM)	0.252	24
13--ETHANE (PPMC)	0.001	17
14--ETHYLENE (PPMC)	0.004	17
16--ACETYLENE (PPMC)	0.008	17
19--FLUOROCARBON-11 (PPT)	139.	21
20--CARBON TETRACHLORIDE (PPT)	120.	20

TABLE 23b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 4, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.100	0.275	0.550	0.450	0.825	0.800
2--WIND SPEED (MPH)	3.800	3.400	3.900	4.300	3.300	3.400	3.450	3.050	2.300	1.000	2.600	4.300
3--WIND DIRECTION (DEGREES)	351.	11.	17.	21.	346.	12.	12.	11.	19.	311.	96.	98.
4--TEMPERATURE (CENTIGRADE)	22.	22.	22.	22.	22.	22.	22.	22.	23.	23.	22.	22.
5--RELATIVE HUMIDITY (PERCENT)	100.	99.	95.	95.	94.	95.	94.	93.	90.	89.	93.	100.
6--OZONE (PPM)	0.045	0.043	0.045	0.043	0.036	0.029	0.022	0.015	0.015	0.015	0.019	0.019
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	0.001	0.004	0.005	0.005	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.001	0.000	.000	.000	.000	.000	0.004	0.006	0.007	0.007	0.006	0.004
9--NITROGEN OXIDES (PPM)	0.001	0.000	.000	.000	.000	.000	0.005	0.010	0.012	0.012	0.008	0.006
10--METHANE (PPMC)	1.652	1.605	1.625	1.647	1.640	1.647	1.600	1.583	1.524	1.506	1.473	1.583
11--NON-METHANE HYDROCARBON (PPMC)	-0.156	-0.091	-0.130	-0.158	-0.165	-0.151	-0.074	-0.045	0.027	0.196	0.108	-0.087
12--CARBON MONOXIDE (PPM)	0.200	0.200	0.212	0.200	0.187	0.212	0.337	0.387	0.212	0.400	0.175	0.150
13--ETHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.001	0.001	0.001	0.001	0.001
14--ETHYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.004	0.006	0.002	0.002	0.002
16--ACETYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.006	0.008	0.003	0.005	0.003
19--FLUOROCARBON-11 (PPT)	145.	139.	-139.	-140.	-140.	141.	128.	135.	134.	139.	144.	130.
20--CARBON TETRACHLORIDE (PPT)	100.	105.	-109.	-113.	-116.	120.	-124.	128.	95.	105.	68.	135.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.700	0.850	0.950	0.950	0.700	0.400	0.225	0.125	0.100	0.025	.000	.000
2--WIND SPEED (MPH)	3.200	4.400	2.900	3.400	3.200	2.100	3.300	2.800	3.300	3.900	3.000	2.700
3--WIND DIRECTION (DEGREES)	105.	126.	146.	137.	156.	176.	175.	190.	188.	174.	184.	175.
4--TEMPERATURE (CENTIGRADE)	23.	23.	24.	24.	24.	24.	24.	23.	23.	23.	22.	22.
5--RELATIVE HUMIDITY (PERCENT)	94.	91.	87.	83.	82.	83.	86.	92.	92.	92.	93.	96.
6--OZONE (PPM)	0.021	0.018	0.020	0.022	0.022	0.018	0.008	0.006	0.005	0.006	0.009	0.008
7--NITRIC OXIDE (PPM)	0.002	0.003	0.004	0.005	0.004	0.004	0.003	0.003	0.002	0.002	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.004	0.006	0.008	0.010	0.014	0.014	0.016	0.017	0.015	0.011	0.008	0.006
9--NITROGEN OXIDES (PPM)	0.006	0.009	0.011	0.015	0.018	0.018	0.019	0.019	0.018	0.013	0.009	0.008
10--METHANE (PPMC)	1.523	1.576	1.580	1.573	1.580	1.653	1.598	1.939	1.866	1.649	1.653	1.756
11--NON-METHANE HYDROCARBON (PPMC)	-0.067	-0.046	-0.026	0.005	-0.028	0.051	-0.086	-0.170	-0.153	-0.173	-0.125	-0.265
12--CARBON MONOXIDE (PPM)	0.100	0.150	0.162	0.487	0.387	0.387	0.225	0.350	0.262	0.225	0.200	0.225
13--ETHANE (PPMC)	0.001	0.002	0.002	0.001	0.002	0.002	0.001	0.001	0.002	0.001	0.001	0.001
14--ETHYLENE (PPMC)	0.002	0.013	0.006	0.004	0.005	0.006	0.003	0.008	0.004	0.003	0.003	0.003
16--ACETYLENE (PPMC)	0.003	0.019	0.004	0.008	0.009	0.010	0.003	0.027	0.008	0.006	0.006	0.005
19--FLUOROCARBON-11 (PPT)	137.	132.	139.	140.	139.	164.	130.	148.	146.	134.	134.	141.
20--CARBON TETRACHLORIDE (PPT)	110.	128.	122.	170.	120.	155.	82.	130.	165.	135.	115.	112.

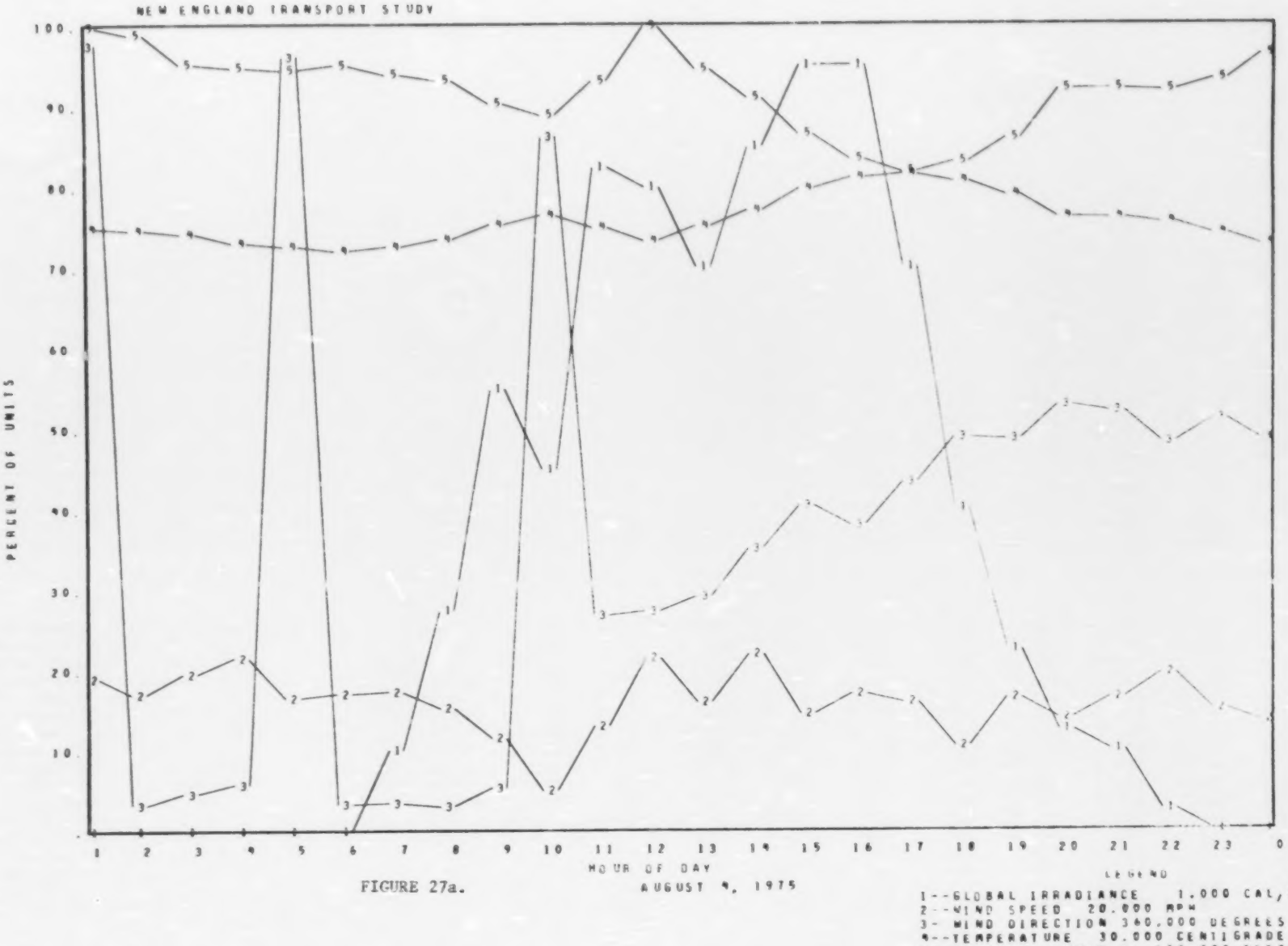

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 4, 1975
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 27a.

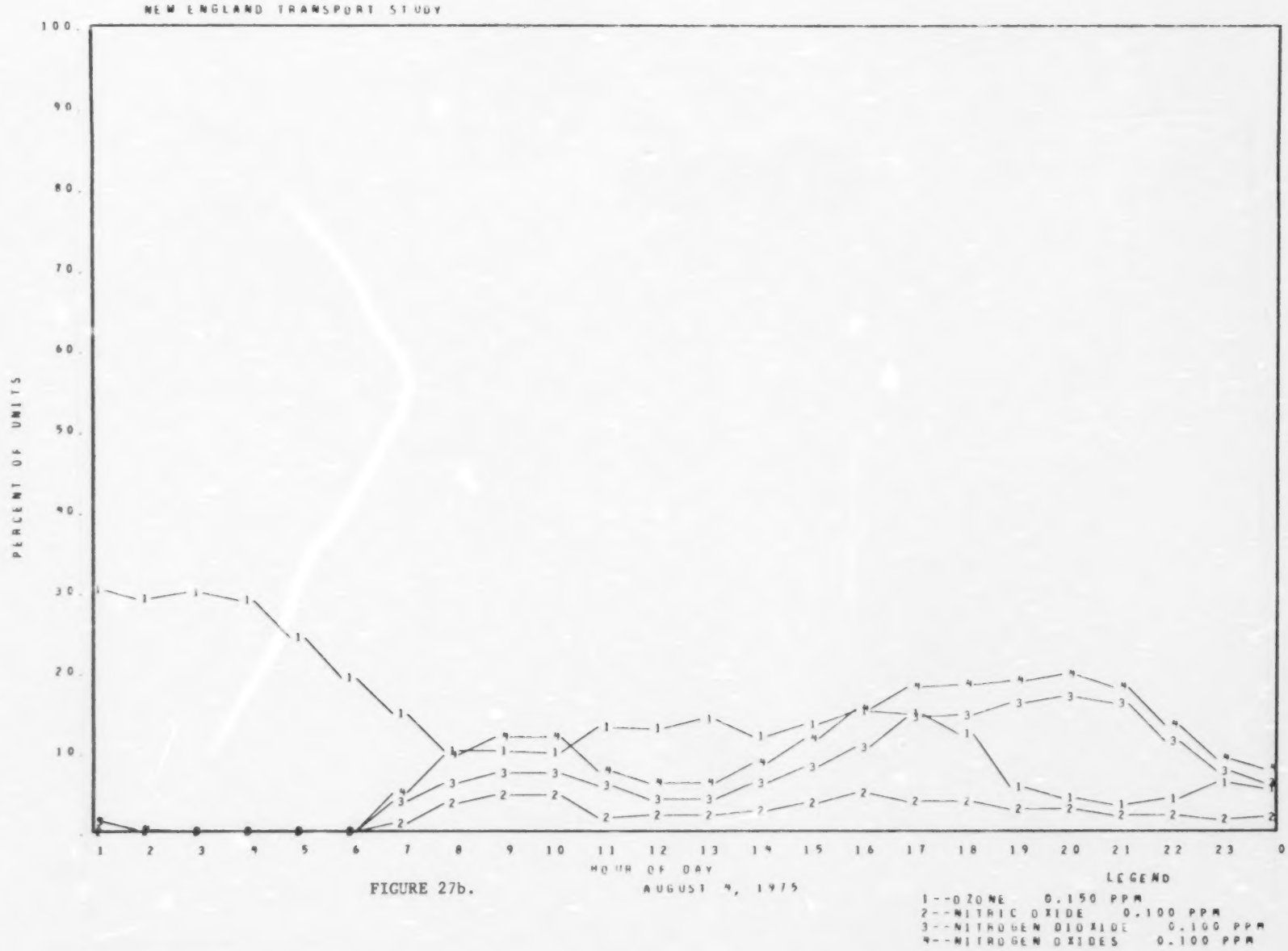

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 4, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 27b.

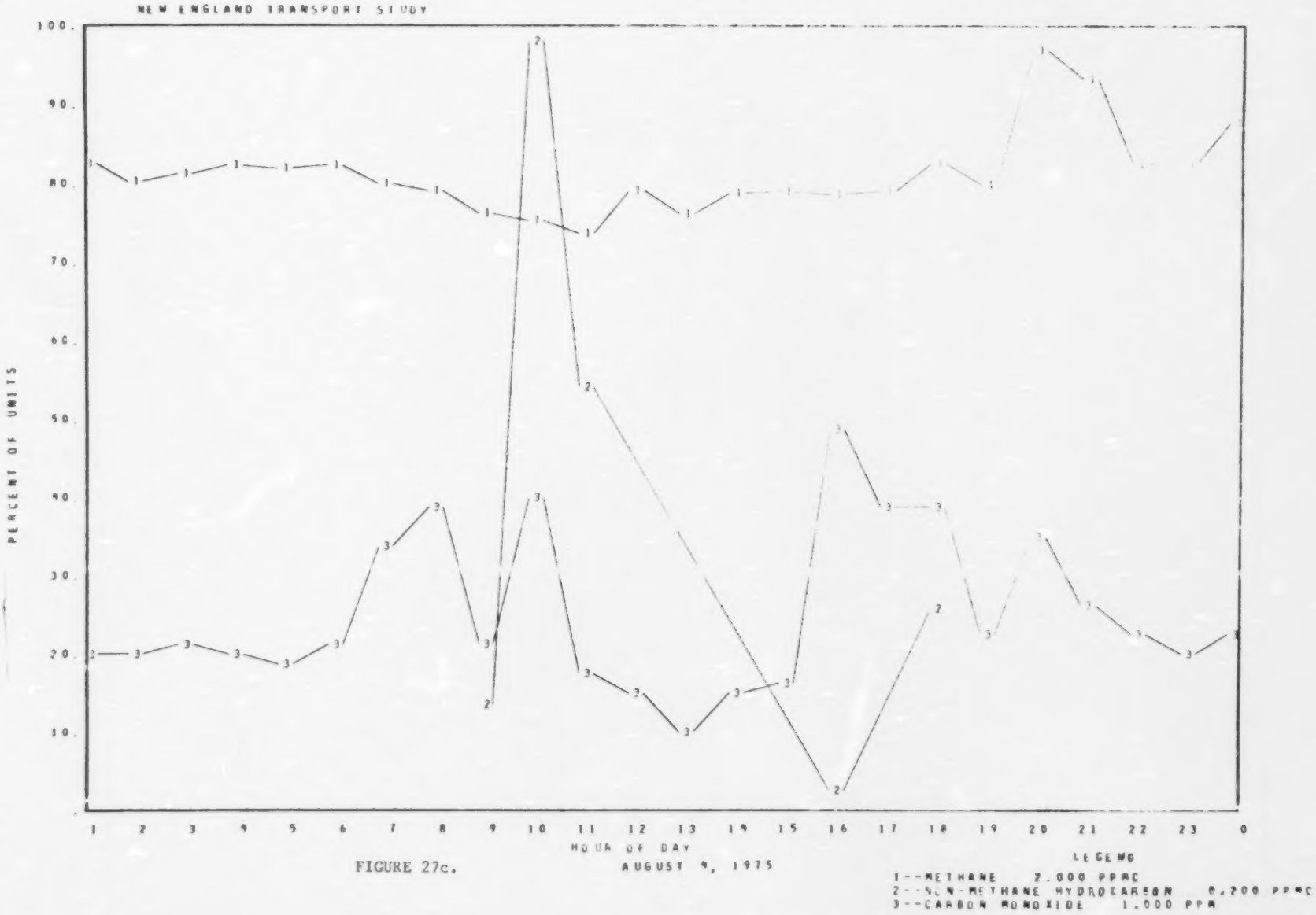

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 4, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 0.200 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 27c.

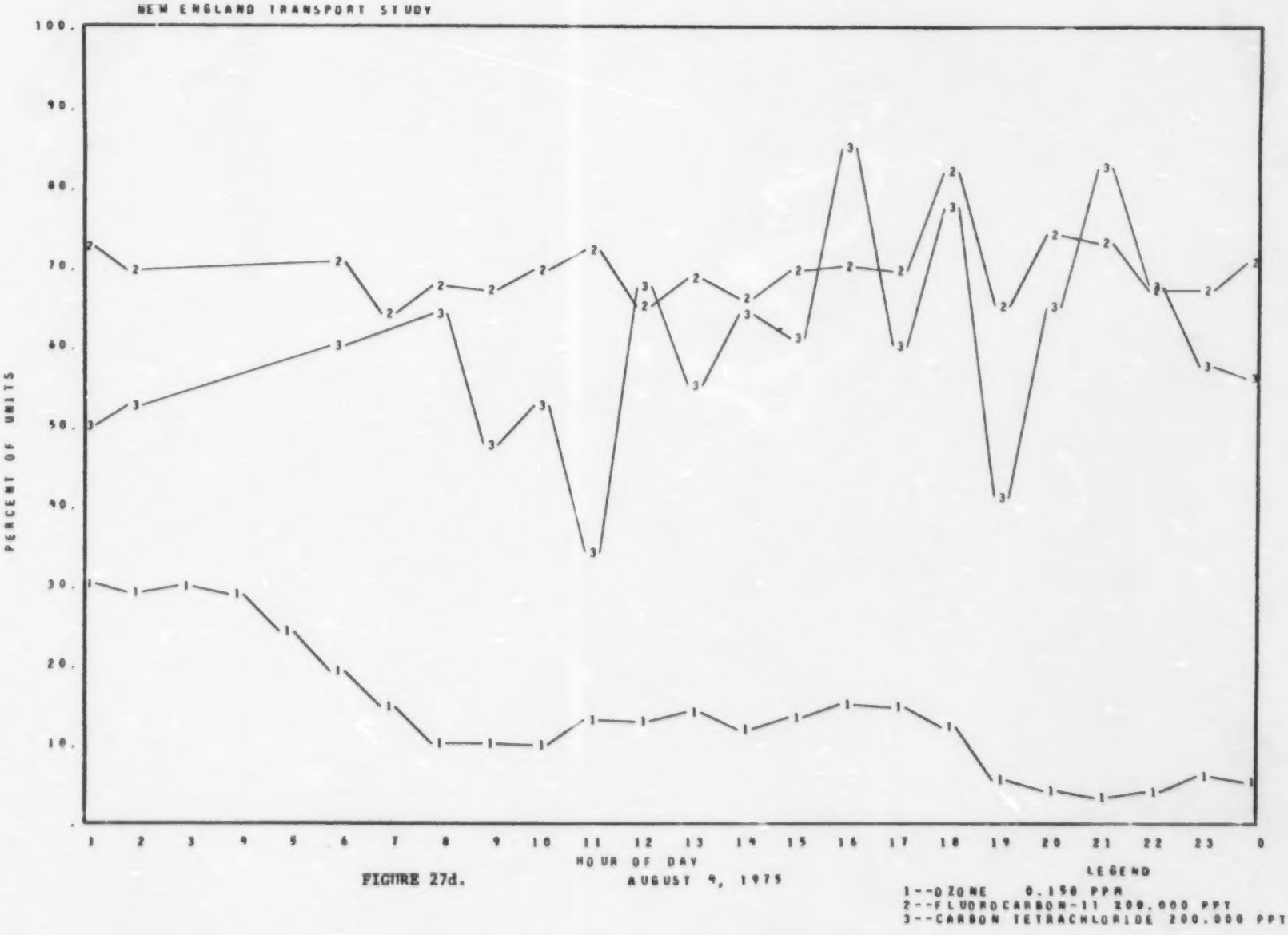
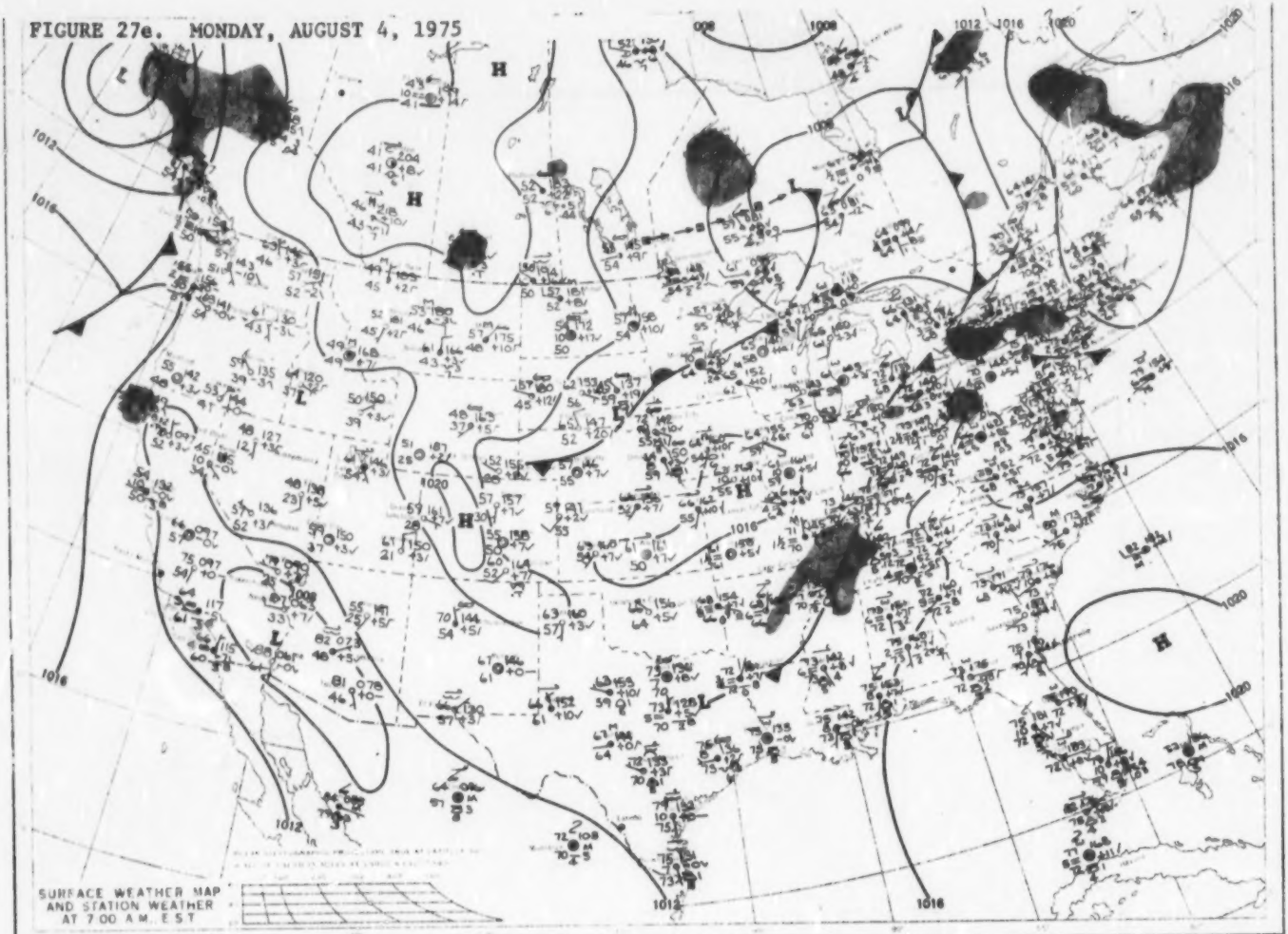
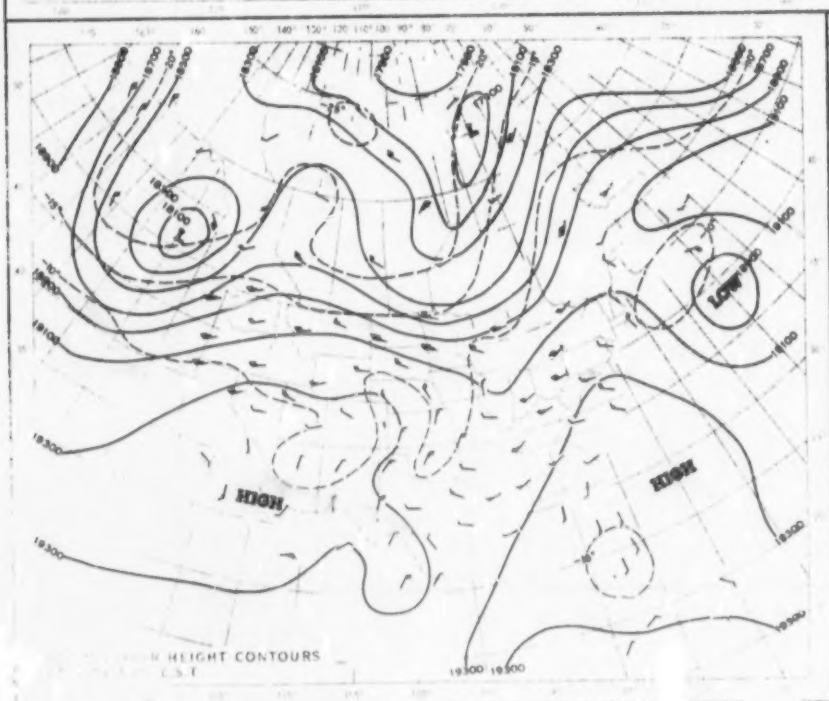

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 9, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 27d.

FIGURE 27e. MONDAY, AUGUST 4, 1975





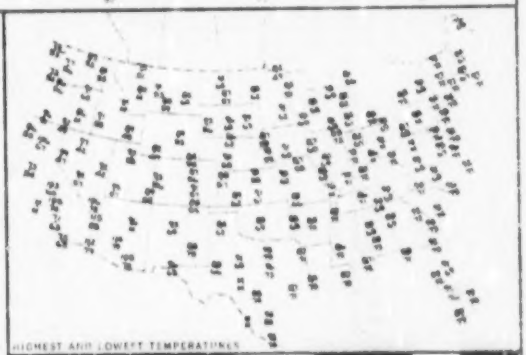


TABLE 24a. AUGUST 5, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.329	24
2--WIND SPEED (MPH)	3.454	24
3--WIND DIRECTION (DEGREES)	254.921	24
4--TEMPERATURE (CENTIGRADE)	27.129	24
5--RELATIVE HUMIDITY (PERCENT)	65.430	24
6--OZONE (PPM)	0.031	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.844	24
11--NON-METHANE HYDROCARBON (PPMC)	0.098	6
12--CARBON MONOXIDE (PPM)	0.198	24
13--ETHANE (PPMC)	0.001	15
14--ETHYLENE (PPMC)	0.005	18
15--PROPANE (PPMC)	0.006	6
16--ACETYLENE (PPMC)	0.006	23
17--ISO-BUTANE (PPMC)	0.009	8
18--N-BUTANE (PPMC)	0.021	8
19--FLUOROCARBON-11 (PPT)	133.	24
20--CARBON TETRACHLORIDE (PPT)	108.	24

TABLE 24b.

SUBSTANCE — HOUR AVERAGES FOR AUGUST 5, 1975

	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.150	1.350	3.150	4.600	5.700	6.200
2--WIND SPEED (MPH)	3.400	2.500	2.700	2.900	3.300	3.200	2.000	1.500	2.400	5.050	7.150	6.100
3--WIND DIRECTION (DEGREES)	157.	170.	157.	176.	199.	193.	221.	241.	277.	340.	351.	350.
4--TEMPERATURE (CENTIGRADE)	22.	22.	22.	22.	22.	22.	22.	24.	26.	28.	29.	31.
5--RELATIVE HUMIDITY (PERCENT)	98.	100.	100.	100.	100.	100.	94.	83.	66.	57.	53.	49.
6--OZONE (PPM)	0.005	0.005	0.007	0.004	0.007	0.003	0.013	0.019	0.026	0.035	0.043	0.051
7--NITRIC OXIDE (PPM)	0.002	0.002	0.002	0.002	0.002	0.002	0.004	0.011	0.006	0.004	0.003	0.003
8--NITROGEN DIOXIDE (PPM)	0.007	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.004	0.003	0.004	0.002
9--NITROGEN OXIDES (PPM)	0.009	0.008	0.007	0.007	0.006	0.007	0.010	0.017	0.010	0.006	0.007	0.005
10--METHANE (PPMC)	1.570	1.550	1.550	1.760	1.850	1.800	1.690	1.690	1.650	1.690	1.700	1.700
11--NON-METHANE HYDROCARBON (PPMC)	-0.109	-0.069	-0.032	-0.155	-0.050	0.110	0.011	-0.027	-0.042	-0.058	-0.073	-0.089
12--CARBON MONOXIDE (PPM)	0.200	0.187	0.138	0.188	0.188	0.200	0.275	0.575	0.287	0.250	0.175	0.100
13--ETHANE (PPMC)	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.001	0.002	0.001	0.002
14--ETHYLENE (PPMC)	0.004	0.003	0.003	0.003	0.003	0.003	0.007	0.015	0.002	0.003	0.001	.000
15--PROPANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
16--ACETYLENE (PPMC)	0.005	0.005	0.005	0.004	0.004	0.006	0.012	0.018	0.003	0.002	0.002	0.001
17--ISO-BUTANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
18--N-BUTANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	130.	128.	126.	132.	147.	183.	176.	132.	162.	121.	114.	121.
20--CARBON TETRACHLORIDE (PPT)	125.	128.	110.	135.	120.	140.	120.	130.	128.	125.	128.	120.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.000	6.775	5.575	5.875	4.600	3.325	1.200	0.275	0.100	.000	.000	.000
2--WIND SPEED (MPH)	5.700	4.000	2.900	4.200	4.900	6.000	3.700	2.500	1.500	1.600	1.300	2.500
3--WIND DIRECTION (DEGREES)	352.	349.	312.	279.	293.	305.	290.	312.	198.	350.	242.	4.
4--TEMPERATURE (CENTIGRADE)	32.	34.	35.	35.	35.	35.	31.	29.	25.	24.	22.	23.
5--RELATIVE HUMIDITY (PERCENT)	44.	39.	36.	35.	33.	33.	38.	43.	62.	70.	74.	65.
6--OZONE (PPM)	0.052	0.050	0.048	0.047	0.052	0.058	0.060	0.049	0.027	0.030	0.011	0.035
7--NITRIC OXIDE (PPM)	0.004	0.003	0.005	0.005	0.009	0.004	0.004	0.001	0.001	0.001	0.002	0.000
8--NITROGEN DIOXIDE (PPM)	0.001	0.003	0.003	0.002	0.002	0.003	0.005	0.006	0.006	0.008	0.012	0.007
9--NITROGEN OXIDES (PPM)	0.005	0.005	0.008	0.008	0.011	0.007	0.009	0.007	0.007	0.008	0.014	0.007
10--METHANE (PPMC)	1.700	1.800	1.700	1.600	1.600	1.550	1.550	1.600	1.750	1.800	5.250	2.150
11--NON-METHANE HYDROCARBON (PPMC)	-0.105	-0.120	-0.136	0.151	0.031	0.013	-0.064	-0.116	-0.167	-0.218	0.272	-0.280
12--CARBON MONOXIDE (PPM)	0.112	0.087	0.112	0.187	0.212	0.162	0.137	0.125	0.175	0.175	0.350	0.162
13--ETHANE (PPMC)	0.002	0.002	0.001	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
14--ETHYLENE (PPMC)	0.011	0.004	0.001	-0.004	-0.007	-0.010	-0.014	-0.017	0.020	0.001	0.001	-1.000
15--PROPANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.003	0.003	0.005	0.010	0.008	0.007
16--ACETYLENE (PPMC)	0.018	0.004	0.002	-0.003	0.004	0.007	0.002	0.002	0.018	0.003	0.006	0.003
17--ISO-BUTANE (PPMC)	-1.000	-1.000	-1.000	-1.000	0.007	0.008	0.011	0.015	0.011	0.008	0.007	0.003
18--N-BUTANE (PPMC)	-1.000	-1.000	-1.000	-1.000	0.014	0.022	0.023	0.052	0.026	0.014	0.013	0.008
19--FLUOROCARBON-11 (PPT)	119.	120.	117.	111.	123.	113.	121.	107.	115.	114.	238.	118.
20--CARBON TETRACHLORIDE (PPT)	120.	120.	112.	90.	95.	82.	105.	68.	65.	38.	110.	90.

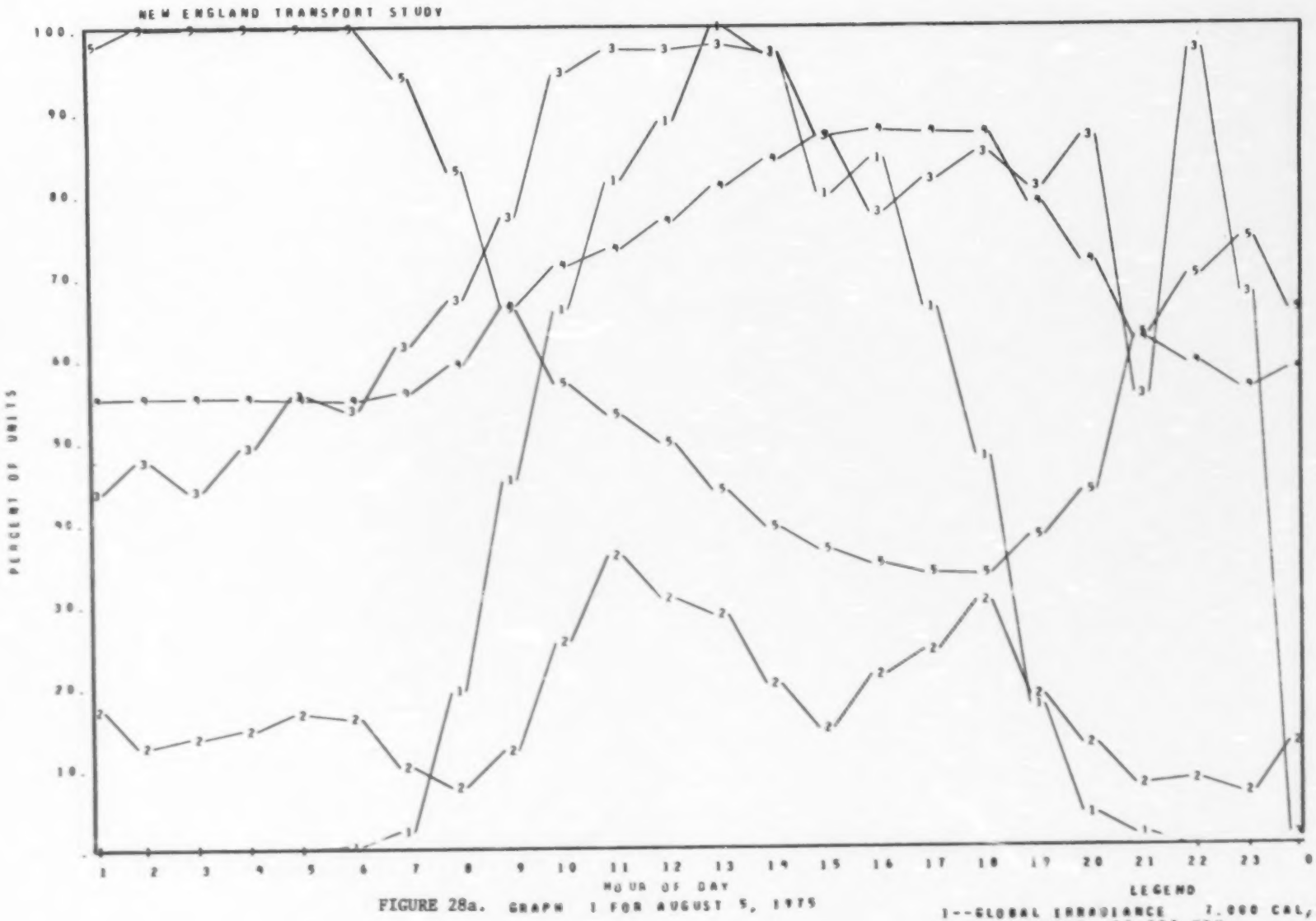


FIGURE 28a. GRAPH 1 FOR AUGUST 5, 1975

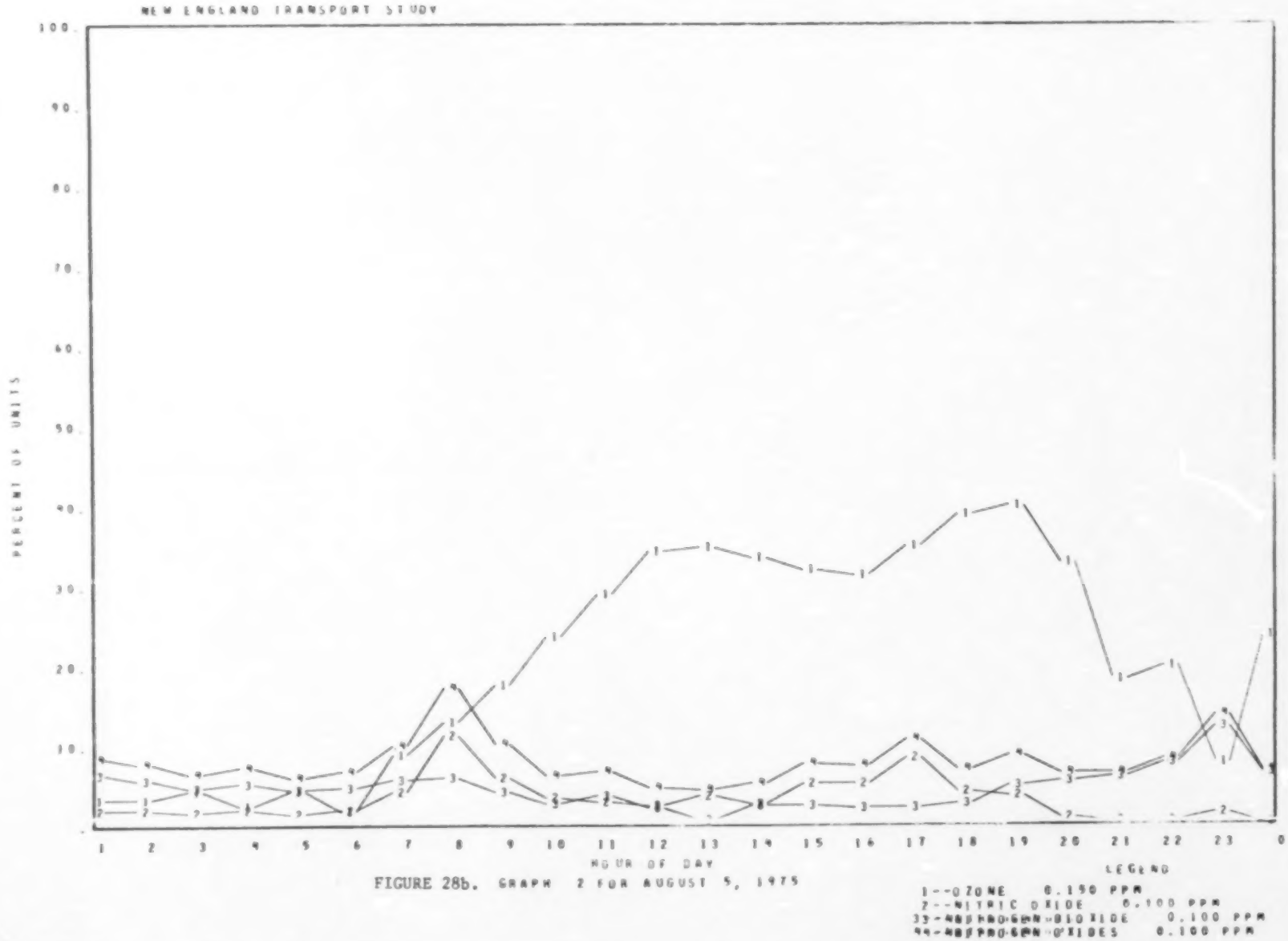


FIGURE 28b. GRAPH 2 FOR AUGUST 5, 1975

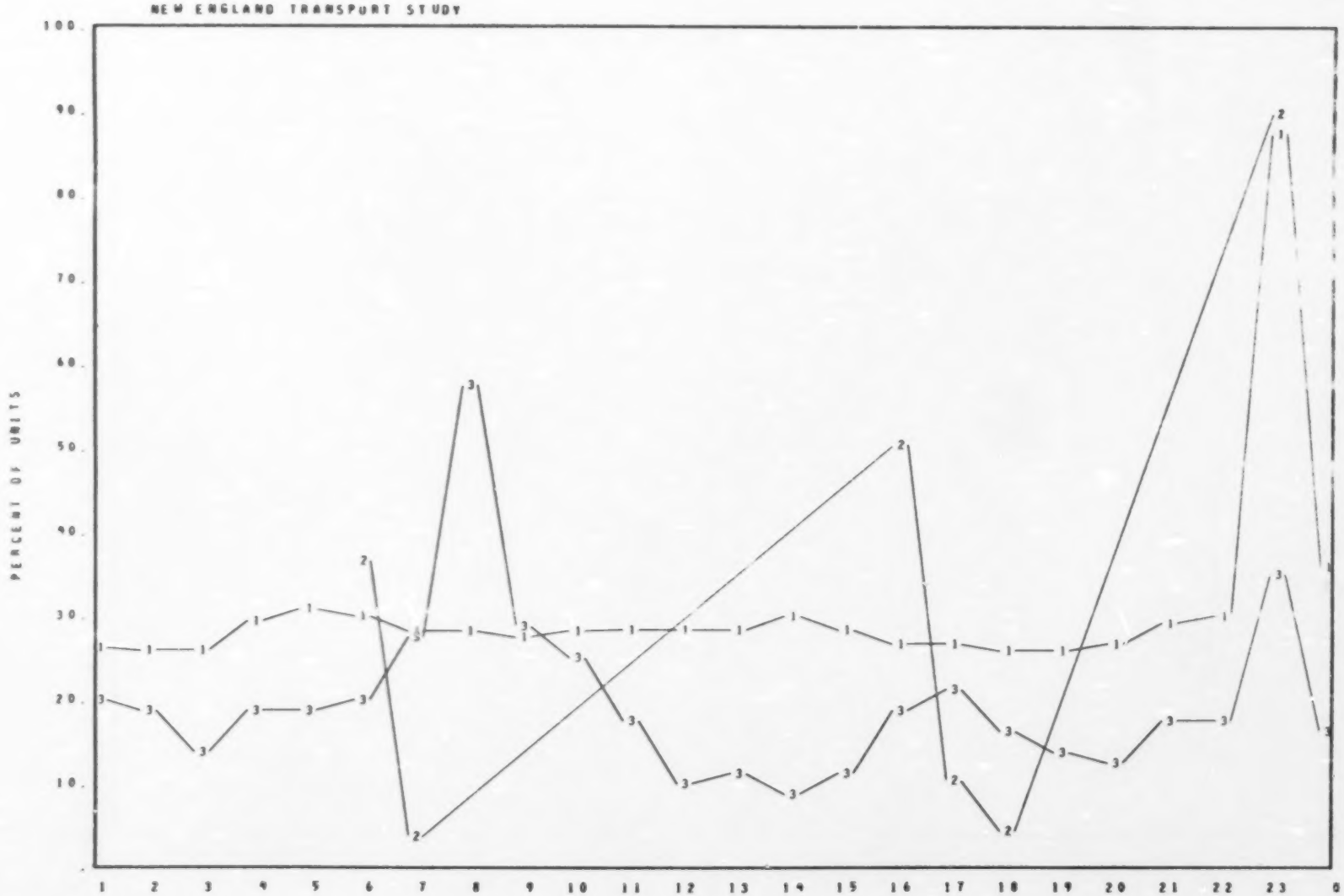


FIGURE 28c. GRAPH 2 FOR AUGUST 5, 1975

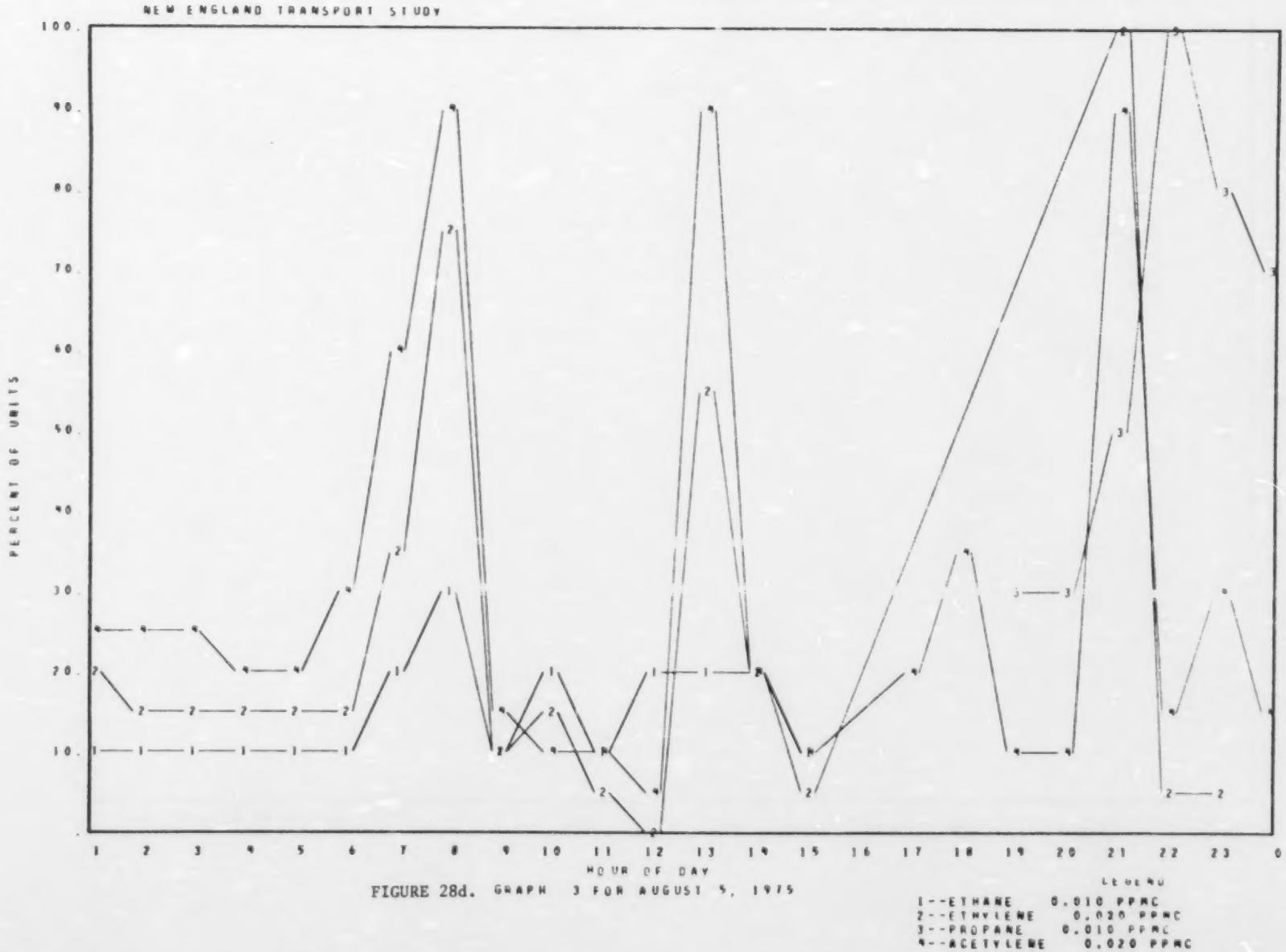


FIGURE 28d. GRAPH 3 FOR AUGUST 5, 1975

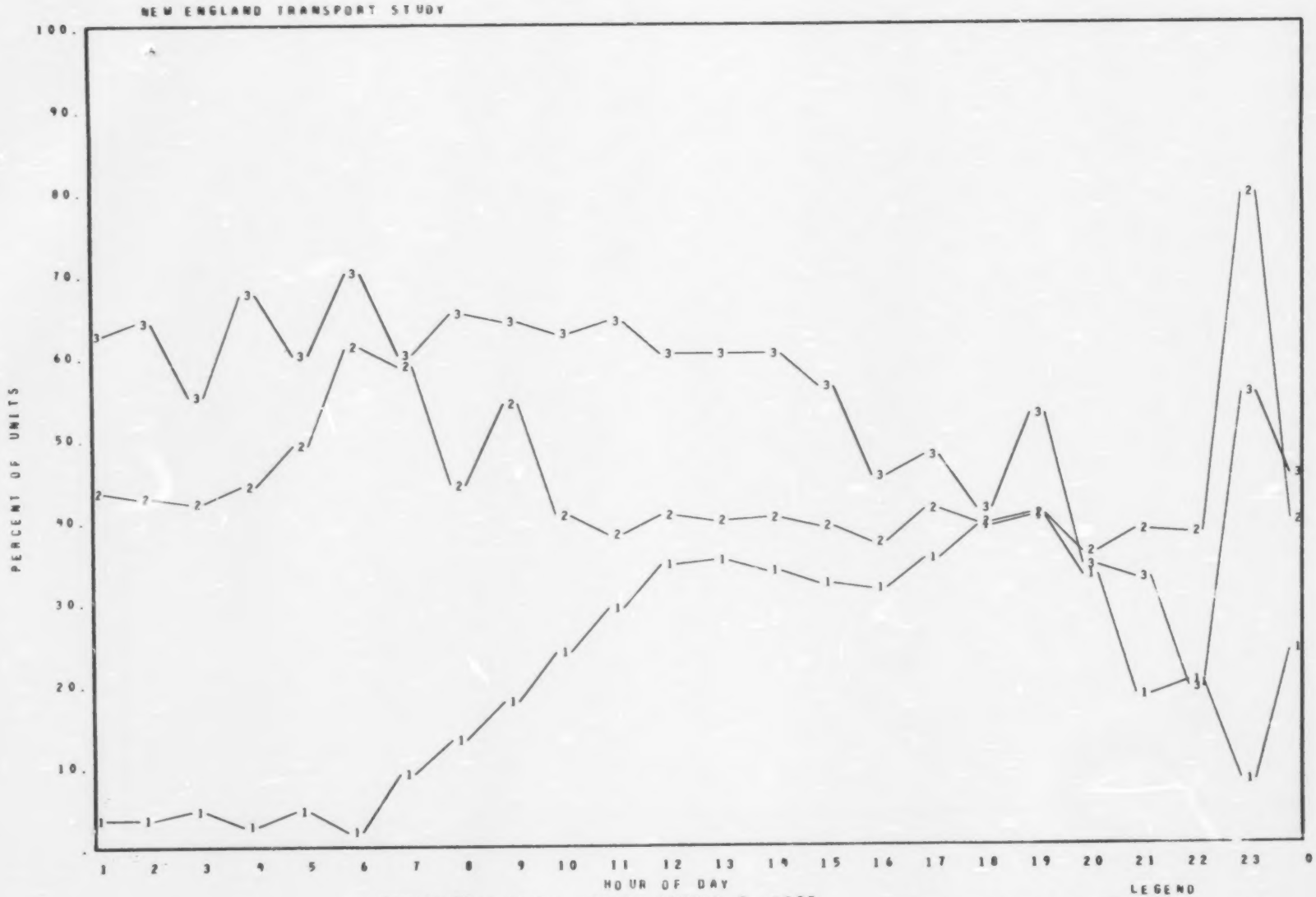


FIGURE 28e. GRAPH 5 FOR AUGUST 5, 1975

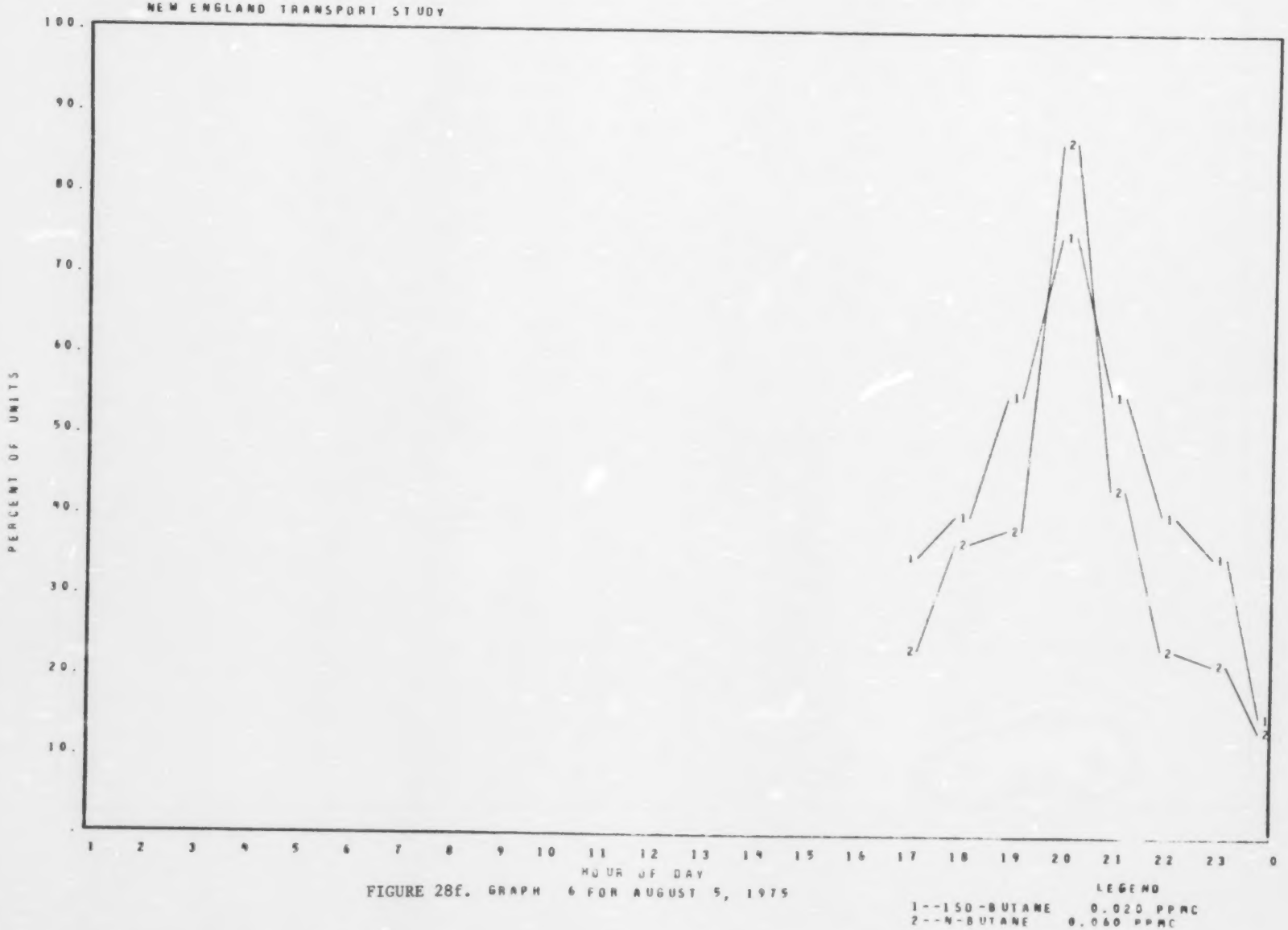
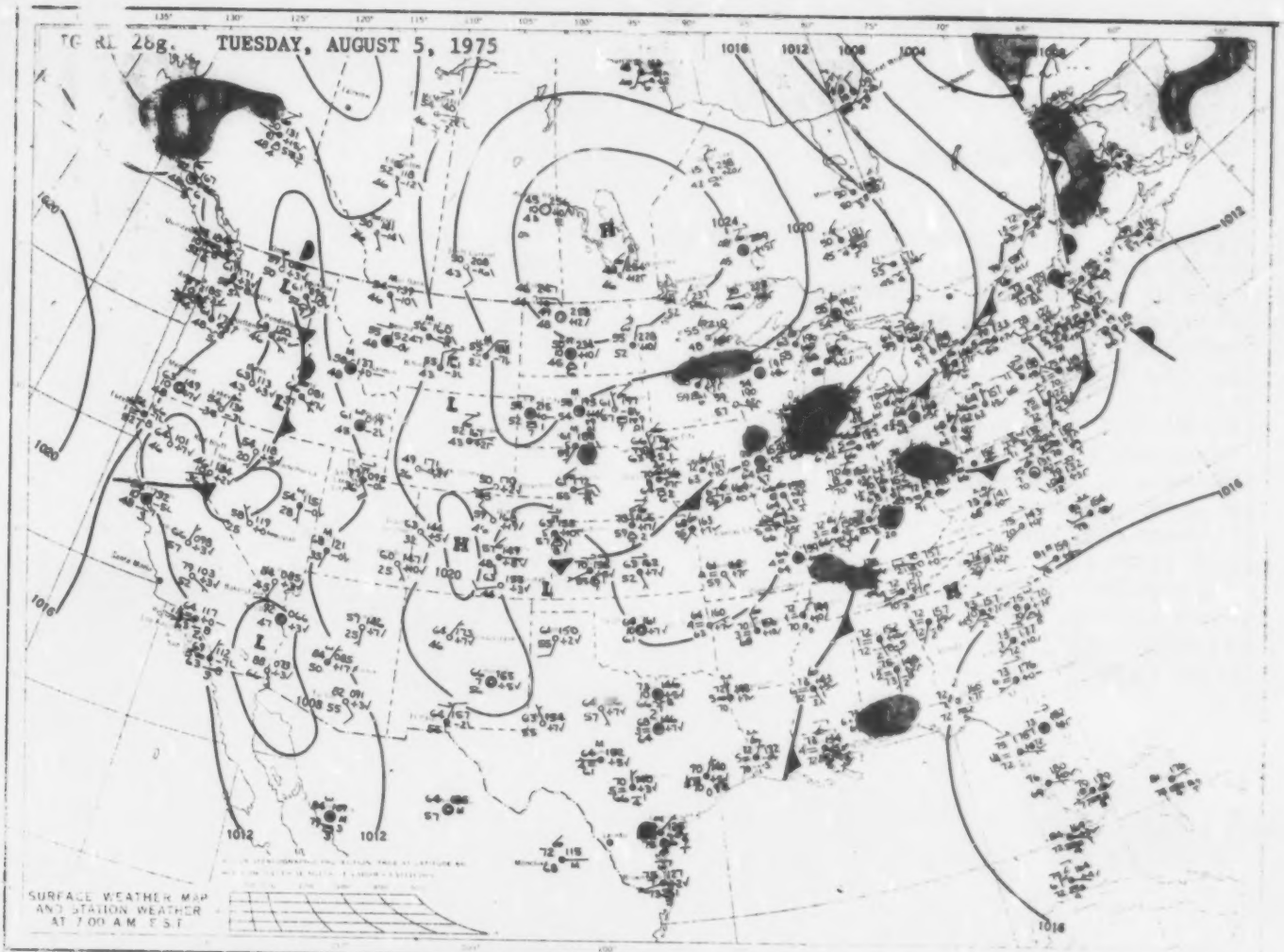
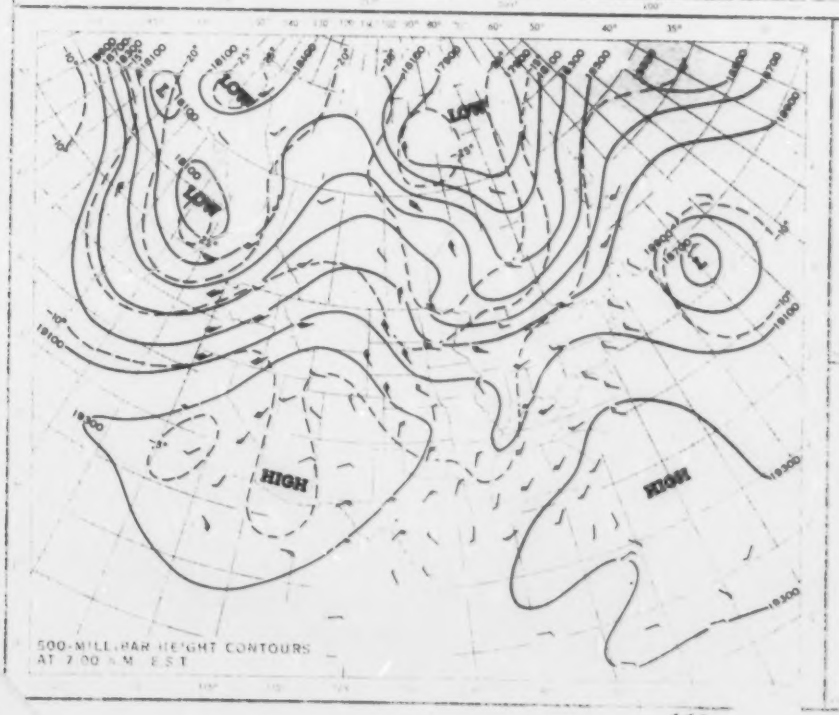


FIGURE 28f. GRAPH 6 FOR AUGUST 5, 1975


TUESDAY, AUGUST 5, 1975
SURFACE WEATHER MAP
AND STATION WEATHER
AT 7:00 A.M. E.S.T.


LOW
HIGH
500-MILLIBAR HEIGHT CONTOURS
AT 7:00 A.M. E.S.T.

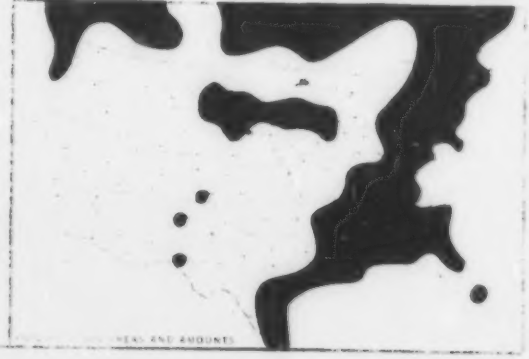


TABLE 25a. AUGUST 6, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.827	24
2--WIND SPEED (MPH)	6.658	24
3--WIND DIRECTION (DEGREES)	313.867	24
4--TEMPERATURE (CENTIGRADE)	20.534	24
5--RELATIVE HUMIDITY (PERCENT)	72.036	24
6--OZONE (PPM)	0.019	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.005	24
12--CARBON MONOXIDE (PPM)	0.146	24
14--ETHYLENE (PPMC)	0.004	14
15--PROPANE (PPMC)	0.004	19
16--ACETYLENE (PPMC)	0.003	20
17--ISO-BUTANE (PPMC)	0.003	20
18--N-BUTANE (PPMC)	0.004	20
19--FLUOROCARBON-11 (PPT)	115.	23
20--CARBON TETRACHLORIDE (PPT)	83.	23

TABLE 25b.

SUBSTANCE — HOUR AVERAGES FOR AUGUST 6, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.250	0.700	1.800	4.275	3.175	3.500
2--WIND SPEED (MPH)	0.900	1.500	1.100	2.300	3.600	4.000	3.800	6.900	7.100	8.900	8.300	8.300
3--WIND DIRECTION (DEGREES)	273.	304.	300.	330.	1.	2.	352.	350.	357.	357.	353.	355.
4--TEMPERATURE (CENTIGRADE)	22.	21.	20.	20.	21.	21.	21.	22.	22.	24.	24.	25.
5--RELATIVE HUMIDITY (PERCENT)	70.	76.	79.	80.	74.	70.	70.	63.	61.	53.	52.	51.
6--OZONE (PPM)	0.025	0.017	0.012	0.014	0.024	0.022	0.018	0.017	0.013	0.017	0.021	0.029
7--NITRIC OXIDE (PPM)	0.000	.000	.000	0.000	.000	.000	0.002	0.002	0.003	0.002	0.005	0.004
8--NITROGEN DIOXIDE (PPM)	0.006	0.007	0.006	0.004	0.002	0.002	0.003	0.004	0.002	0.002	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.006	0.007	0.006	0.005	0.002	0.002	0.005	0.005	0.005	0.005	0.007	0.005
12--CARBON MONOXIDE (PPM)	0.162	0.200	0.187	0.150	0.100	0.125	0.188	0.212	0.162	0.133	0.175	0.162
14--ETHYLENE (PPMC)	0.001	0.004	0.002	-0.002	-0.001	-0.001	0.001	0.002	-0.004	-0.006	-0.009	-0.011
15--PROPANE (PPMC)	0.005	0.018	0.004	0.021	0.007	0.003	0.002	0.005	0.001	-0.001	-0.001	-0.002
16--ACETYLENE (PPMC)	0.003	0.003	0.002	0.003	0.002	0.002	0.006	0.002	0.001	-0.001	-0.002	0.002
17--ISO-BUTANE (PPMC)	0.006	0.005	0.003	0.006	0.006	0.004	.000	.000	0.004	-0.005	-0.005	0.006
18--N-BUTANE (PPMC)	0.009	0.009	0.006	0.009	.000	0.004	.000	.000	0.002	-0.004	-0.005	0.007
19--FLUOROCARBON-11 (PPT)	169.	136.	216.	178.	102.	96.	100.	105.	108.	-108.	109.	108.
20--CARBON TETRACHLORIDE (PPT)	90.	112.	85.	52.	105.	75.	100.	115.	90.	-90.	90.	98.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.525	1.375	0.825	0.425	0.275	0.200	0.250	0.150	0.100	.000	.000	.000
2--WIND SPEED (MPH)	7.800	7.400	7.300	10.200	8.700	8.000	8.700	8.300	8.300	10.700	9.600	8.100
3--WIND DIRECTION (DEGREES)	352.	355.	353.	357.	353.	357.	353.	345.	340.	344.	345.	346.
4--TEMPERATURE (CENTIGRADE)	25.	24.	23.	22.	21.	19.	17.	17.	17.	16.	16.	16.
5--RELATIVE HUMIDITY (PERCENT)	51.	55.	58.	57.	59.	74.	90.	90.	96.	100.	100.	100.
6--OZONE (PPM)	0.035	0.033	0.023	0.019	0.015	0.016	0.017	0.013	0.012	0.014	0.014	0.012
7--NITRIC OXIDE (PPM)	0.002	0.005	0.003	0.002	0.004	0.005	0.003	0.002	0.002	0.001	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.003	0.002	0.003	0.003	0.004	0.004	0.003	0.003	0.003	0.002	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.005	0.007	0.007	0.005	0.008	0.009	0.006	0.004	0.004	0.003	0.002	0.001
12--CARBON MONOXIDE (PPM)	0.087	0.212	0.125	0.162	0.138	0.187	0.112	0.112	0.125	0.100	0.087	0.087
14--ETHYLENE (PPMC)	-0.013	-0.015	-0.018	0.020	0.020	0.004	0.004	.000	0.004	.000	.000	.000
15--PROPANE (PPMC)	0.002	-0.002	-0.001	0.001	0.001	0.001	0.001	.000	0.007	.000	0.004	0.001
16--ACETYLENE (PPMC)	0.003	-0.006	-0.009	0.012	0.016	0.003	0.002	.000	0.002	.000	.000	.000
17--ISO-BUTANE (PPMC)	0.003	-0.005	-0.006	0.008	0.004	.000	0.004	.000	0.005	.000	.000	.000
18--N-BUTANE (PPMC)	0.005	-0.006	-0.007	0.008	0.004	0.006	0.005	.000	.000	.000	.000	.000
19--FLUOROCARBON-11 (PPT)	111.	102.	107.	104.	100.	100.	96.	99.	104.	95.	95.	94.
20--CARBON TETRACHLORIDE (PPT)	100.	38.	100.	52.	85.	90.	80.	90.	75.	50.	80.	65.

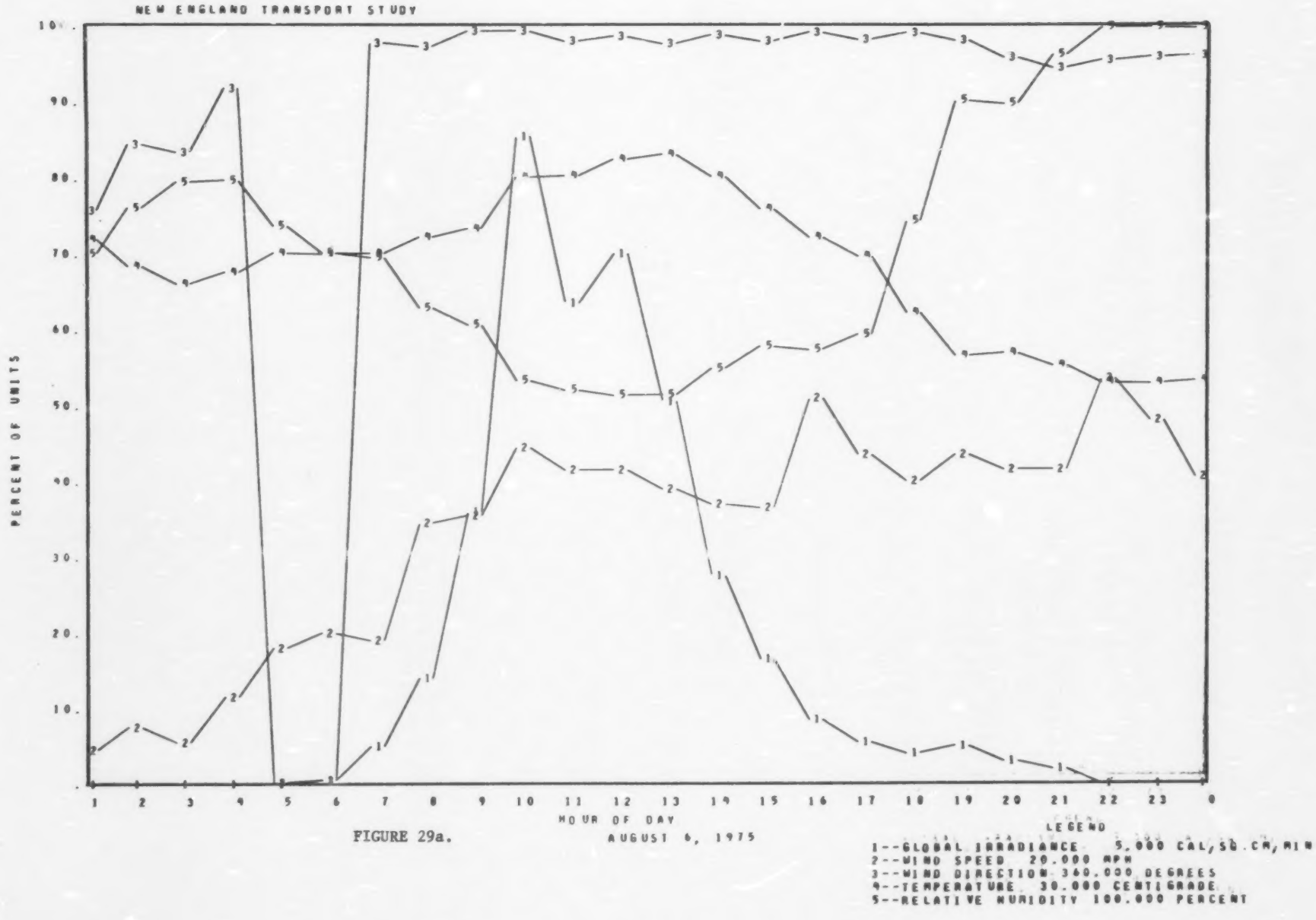

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 6, 1975
LEGEND
1--GLOBAL IRRADIANCE 5.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 29a.

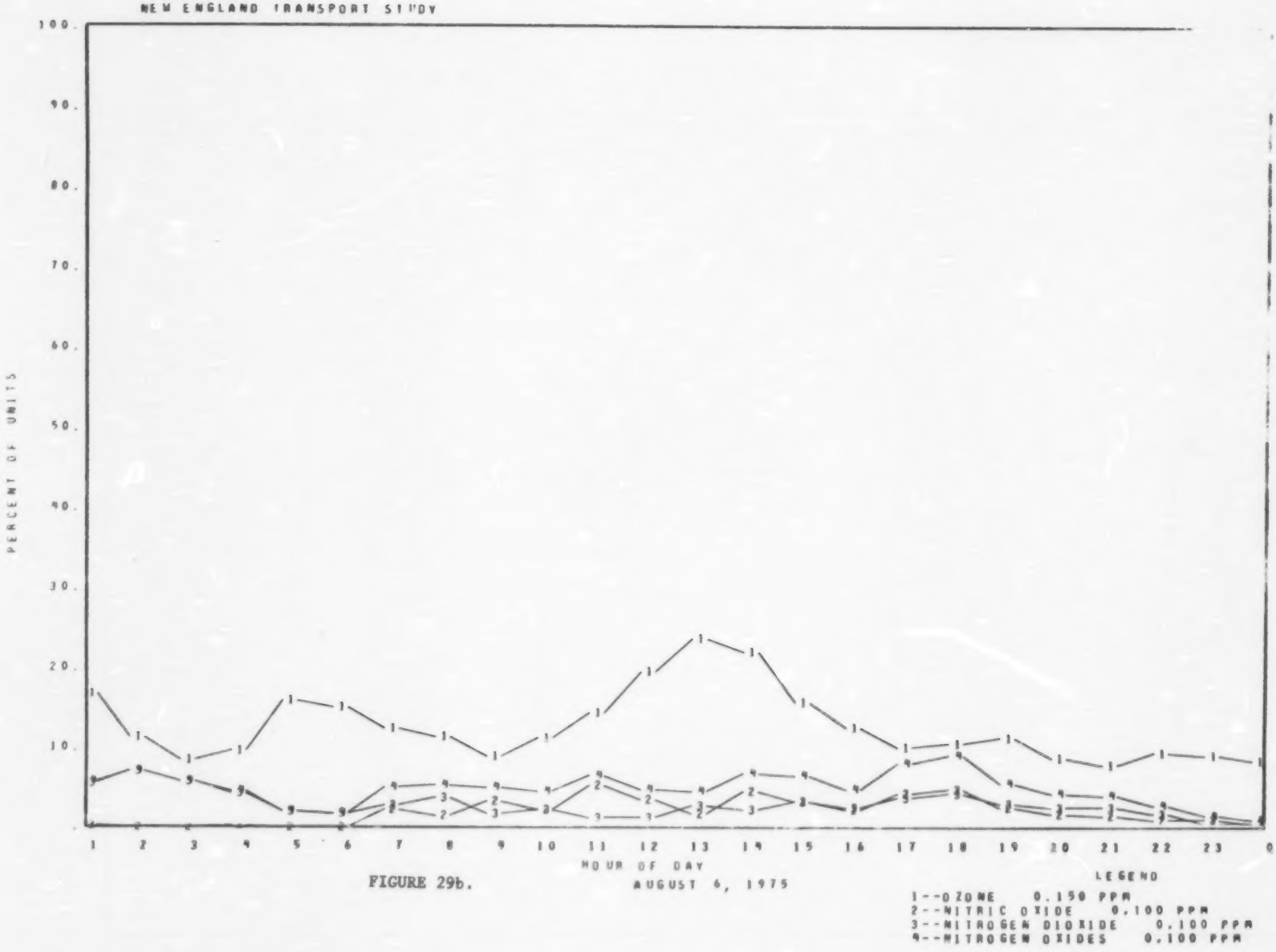

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 6, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 29b.

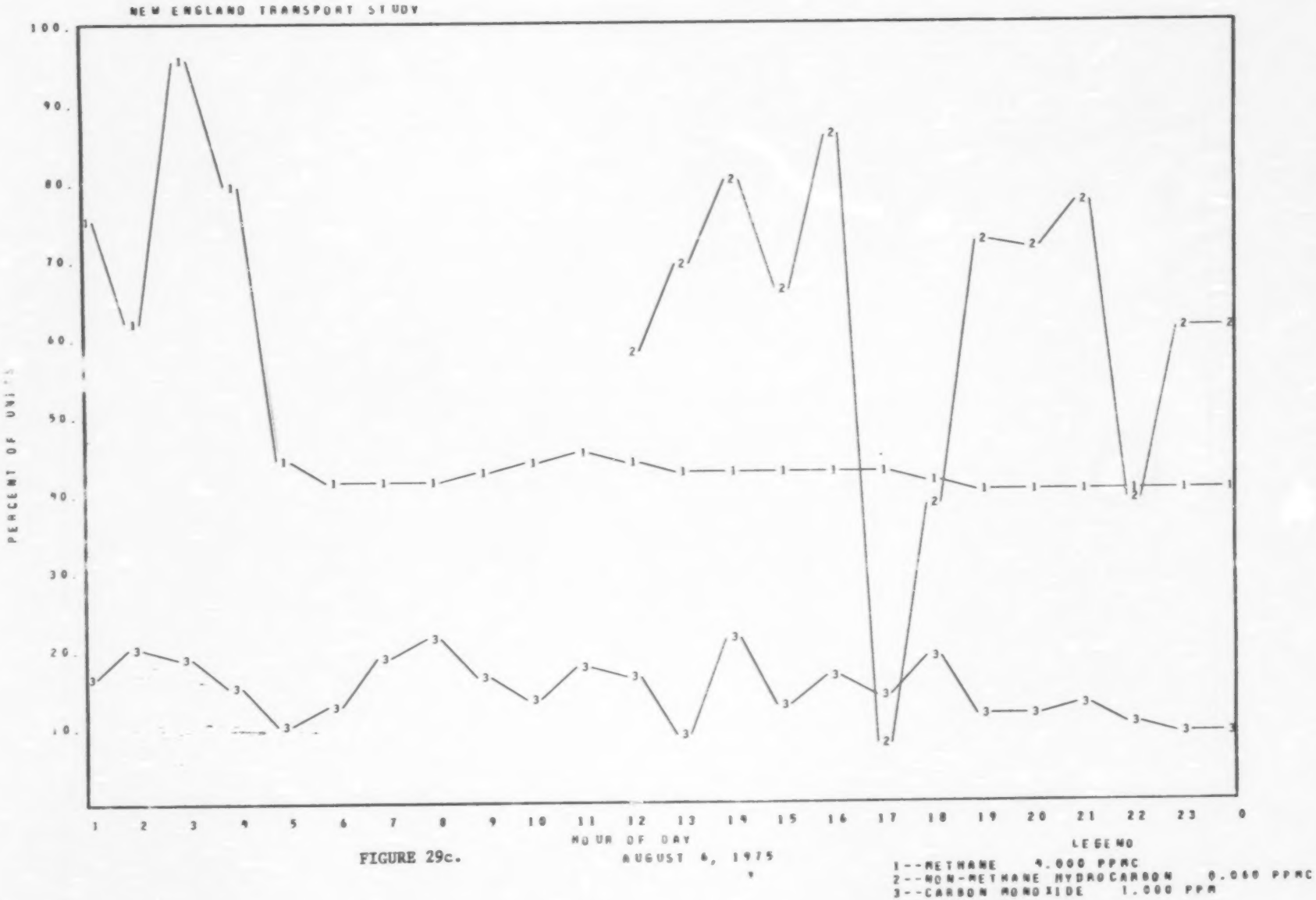

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 6, 1975
LEGEND
1--METHANE 4.000 PPMC
2--NON-METHANE HYDROCARBON 0.060 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 29c.

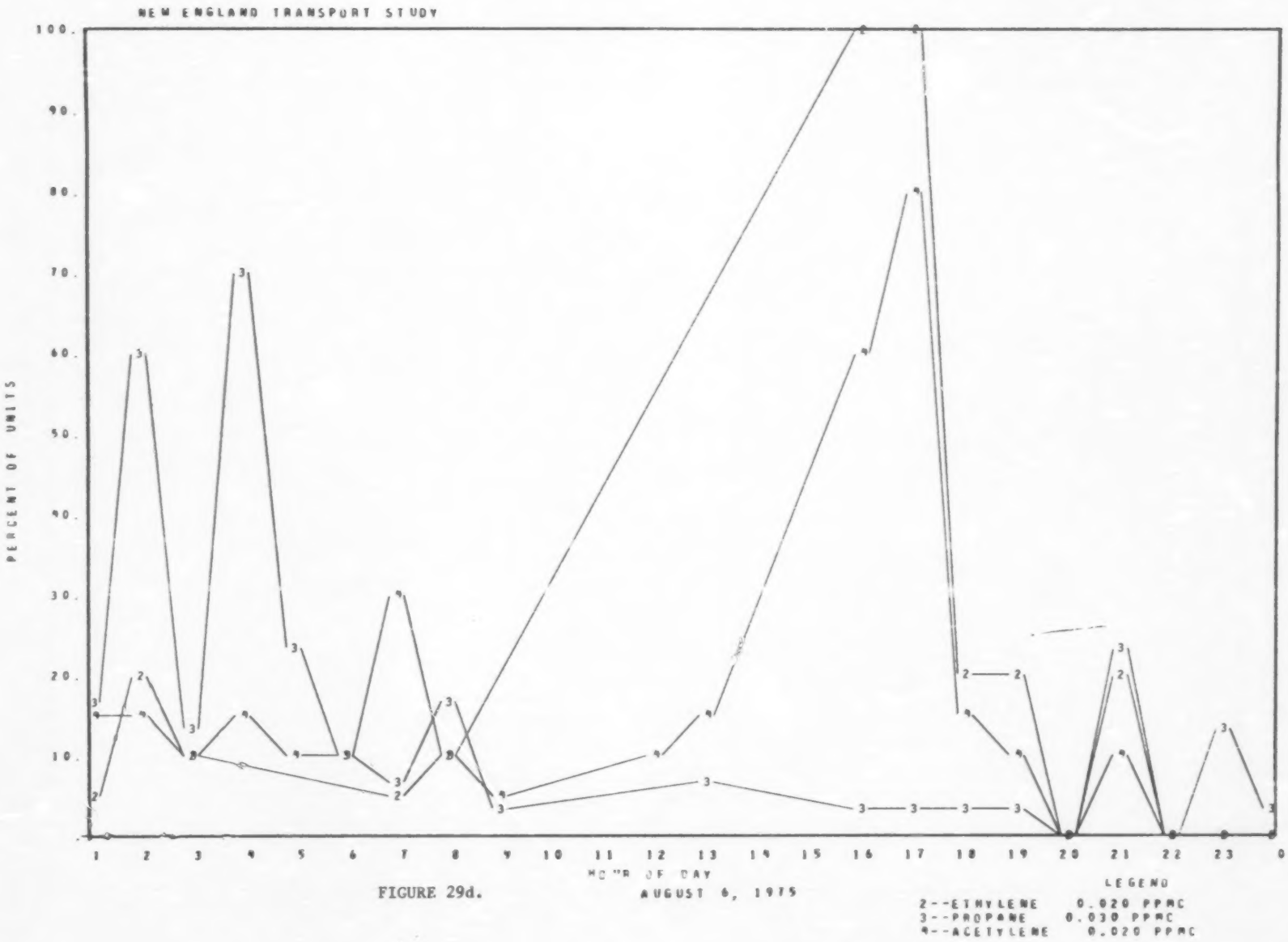

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 6, 1975
LEGEND
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.030 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 29d.

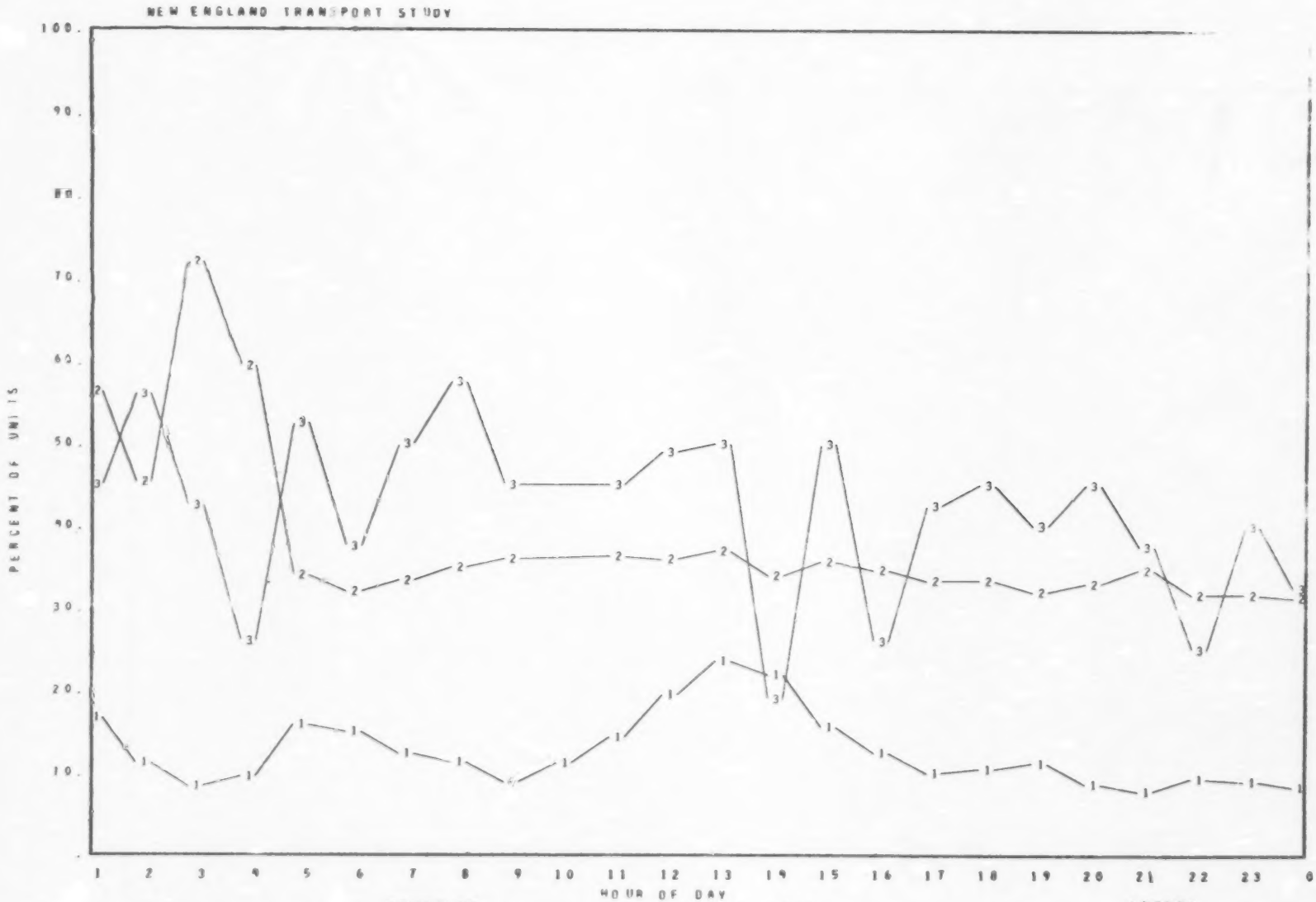

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 6, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 29a.

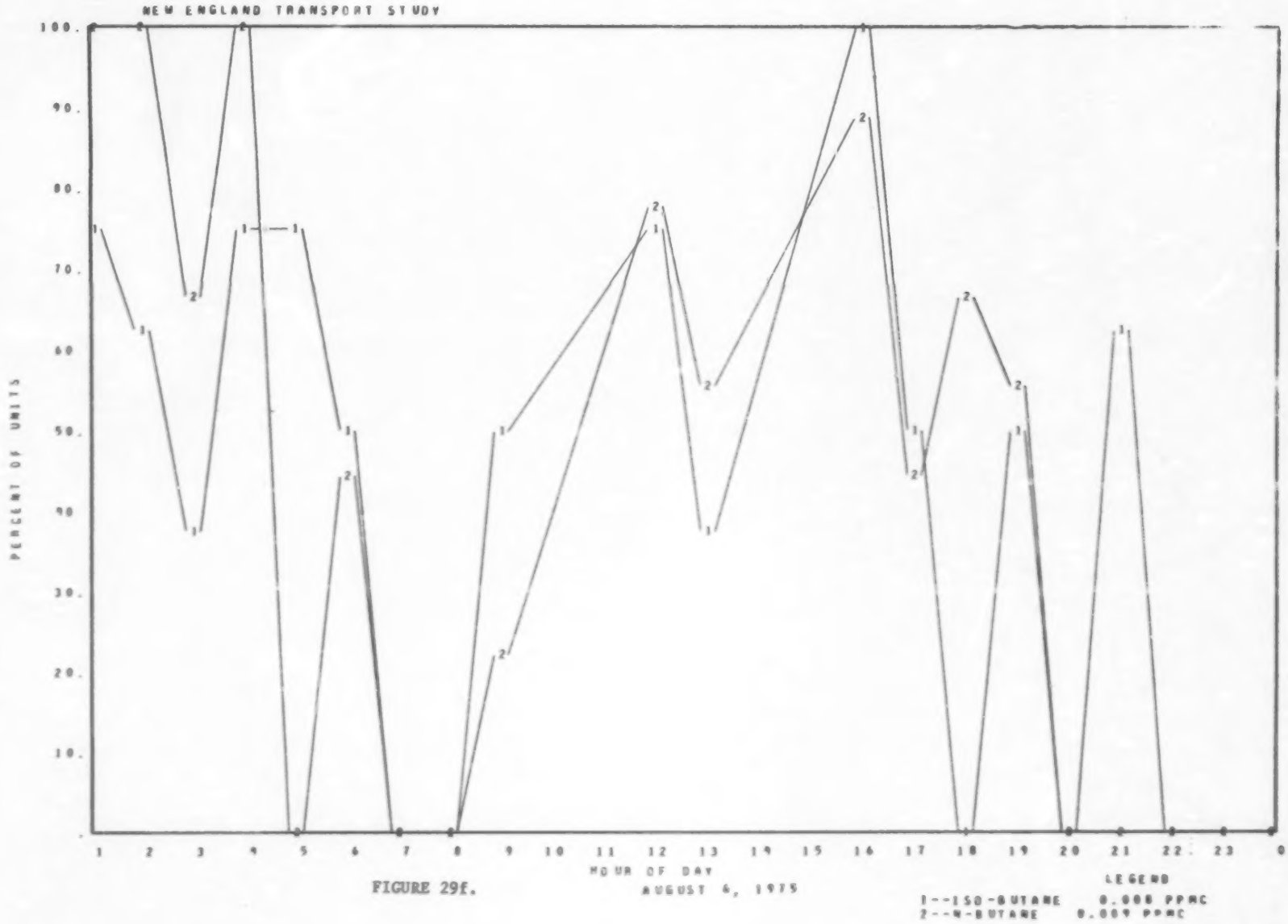
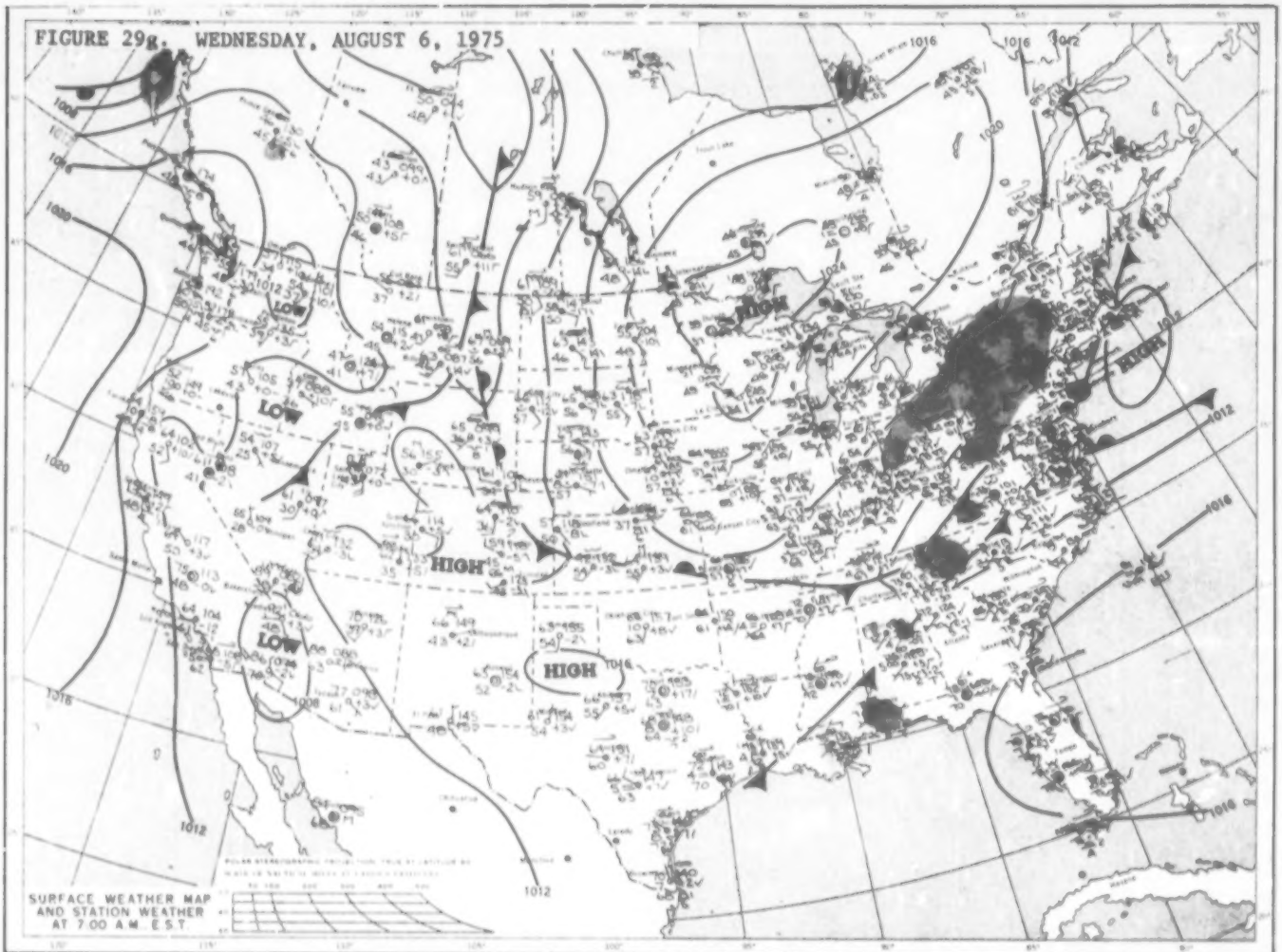

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 4, 1975
LEGEND
1--ISO-BUTANE 0.008 PPMC
2--N-BUTANE 0.009 PPMC

FIGURE 29f.

FIGURE 29g. WEDNESDAY, AUGUST 6, 1975



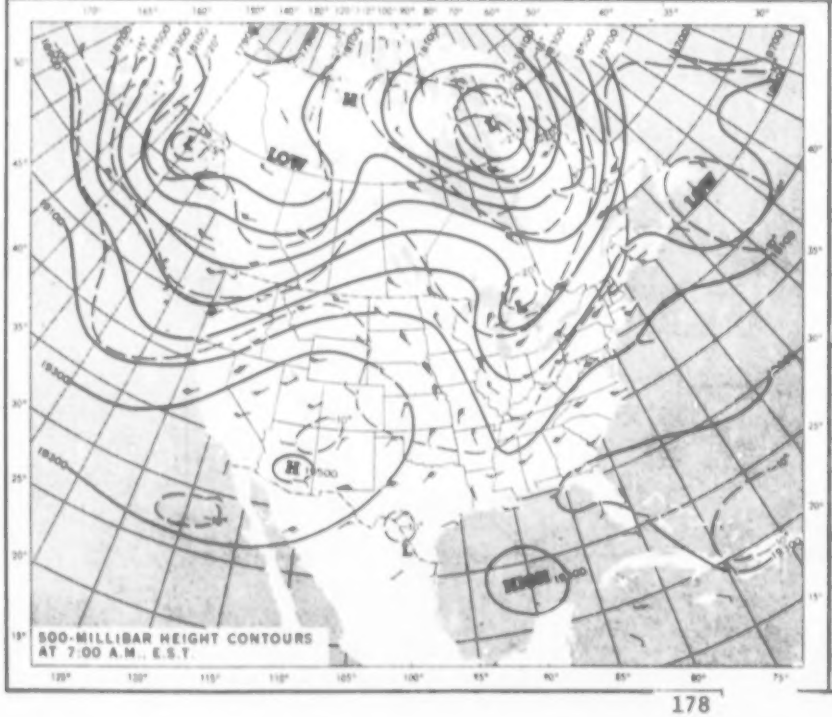


TABLE 26a. AUGUST 7, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.348	24
2--WIND SPEED (MPH)	8.033	24
3--WIND DIRECTION (DEGREES)	343.496	24
4--TEMPERATURE (CENTIGRADE)	15.819	24
5--RELATIVE HUMIDITY (PERCENT)	99.784	24
6--OZONE (PPM)	0.015	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.002	24
9--NITROGEN OXIDES (PPM)	0.003	24
0--METHANE (PPMC)	1.468	24
1--NON-METHANE HYDROCARBON (PPMC)	0.163	24
2--CARBON MONOXIDE (PPM)	0.111	24
3--ETHANE (PPMC)	0.001	6
4--ETHYLENE (PPMC)	0.001	6
5--PROPANE (PPMC)	0.020	7
6--ACETYLENE (PPMC)	0.002	7
9--FLUOROCARBON-11 (PPT)	92.	24
0--CARBON TETRACHLORIDE (PPT)	79.	24

TABLE 26b.

SUBSTANCE — HOUR AVERAGES FOR AUGUST 7, 1975

	1	2	3	4	5	6	7	8	9	10		
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.050	0.050	0.150	0.125	0.450	[illegible]	[illegible]
2--WIND SPEED (MPH)	8.500	8.700	9.300	1.900	6.500	11.600	10.400	11.900	10.500	9.400	9.700	10.400
3--WIND DIRECTION (DEGREES)	347.	352.	348.	345.	345.	350.	350.	348.	354.	350.	348.	349.
4--TEMPERATURE (CENTIGRADE)	16.	17.	17.	16.	16.	15.	16.	16.	16.	16.	16.	16.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.010	0.009	0.011	0.014	0.019	0.016	0.013	0.011	0.010	0.010	0.011	0.013
7--NITRIC OXIDE (PPM)	.000	.000	.000	0.000	.000	.000	0.001	0.002	0.002	0.004	0.003	0.002
8--NITROGEN DIOXIDE (PPM)	0.001	0.002	0.002	0.000	.000	.000	.000	0.001	0.001	0.002	0.003	0.003
9--NITROGEN OXIDES (PPM)	0.001	0.002	0.002	0.001	.000	.000	0.001	0.003	0.003	0.006	0.006	0.005
10--METHANE (PPMC)	1.474	1.476	1.476	1.465	1.448	1.471	1.476	1.484	1.529	1.510	1.501	1.538
11--NON-METHANE HYDROCARBON (PPMC)	0.154	0.160	0.158	0.150	0.153	0.133	0.133	0.140	0.127	0.125	0.130	0.115
12--CARBON MONOXIDE (PPM)	0.100	0.100	0.100	0.075	0.050	0.050	0.075	0.125	0.150	0.125	[illegible]	[illegible]
13--ETHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
14--ETHYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
15--PROPANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
16--ACETYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
19--FLUOROCARBON-11 (PPT)	92.	91.	91.	87.	94.	96.	89.	93.	96.	97.	102.	100.
20--CARBON TETRACHLORIDE (PPT)	82.	100.	90.	65.	82.	90.	65.	45.	105.	85.	65.	90

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.050	1.150	0.900	0.725	0.575	0.700	0.300	0.125	0.100	.000	.000	.000
2--WIND SPEED (MPH)	10.500	9.300	9.100	9.500	10.200	8.700	9.100	7.500	6.000	6.600	5.200	6.800
3--WIND DIRECTION (DEGREES)	349.	348.	345.	341.	334.	337.	333.	336.	345.	337.	325.	325.
4--TEMPERATURE (CENTIGRADE)	16.	16.	16.	16.	15.	15.	15.	15.	15.	16.	[illegible]	15.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.014	0.015	0.015	0.019	0.021	0.019	0.017	0.017	0.016	0.015	0.014	0.017
7--NITRIC OXIDE (PPM)	0.003	0.003	0.004	0.003	0.003	0.002	0.001	0.002	0.002	0.000	0.001	0.000
8--NITROGEN DIOXIDE (PPM)	0.001	0.003	0.004	0.004	0.004	0.002	0.003	0.002	0.001	0.001	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.004	0.005	0.008	0.007	0.007	0.004	0.004	0.003	0.003	0.001	0.002	0.001
10--METHANE (PPMC)	1.441	1.453	1.446	1.443	1.441	1.446	1.441	1.441	1.465	1.473	1.455	1.446
11--NON-METHANE HYDROCARBON (PPMC)	0.195	0.205	0.203	0.202	0.181	0.187	0.177	0.208	0.228	0.152	0.142	0.146
12--CARBON MONOXIDE (PPM)	0.137	0.187	0.150	0.137	0.162	0.112	0.125	0.100	0.087	0.100	0.100	0.075
13--ETHANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.001	-0.001	0.002	0.002	.000	.000	.000
14--ETHYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.004	-0.003	0.003	0.002	.000	.000	.000
15--PROPANE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.006	0.051	0.027	0.048	0.006	.000	.000
16--ACETYLENE (PPMC)	-1.000	-1.000	-1.000	-1.000	-1.000	0.002	0.003	0.003	0.004	.000	.000	.000
19--FLUOROCARBON-11 (PPT)	96.	92.	86.	91.	92.	88.	95.	90.	91.	84.	88.	84.
20--CARBON TETRACHLORIDE (PPT)	55.	82.	55.	110.	105.	68.	75.	75.	55.	105.	68.	90.

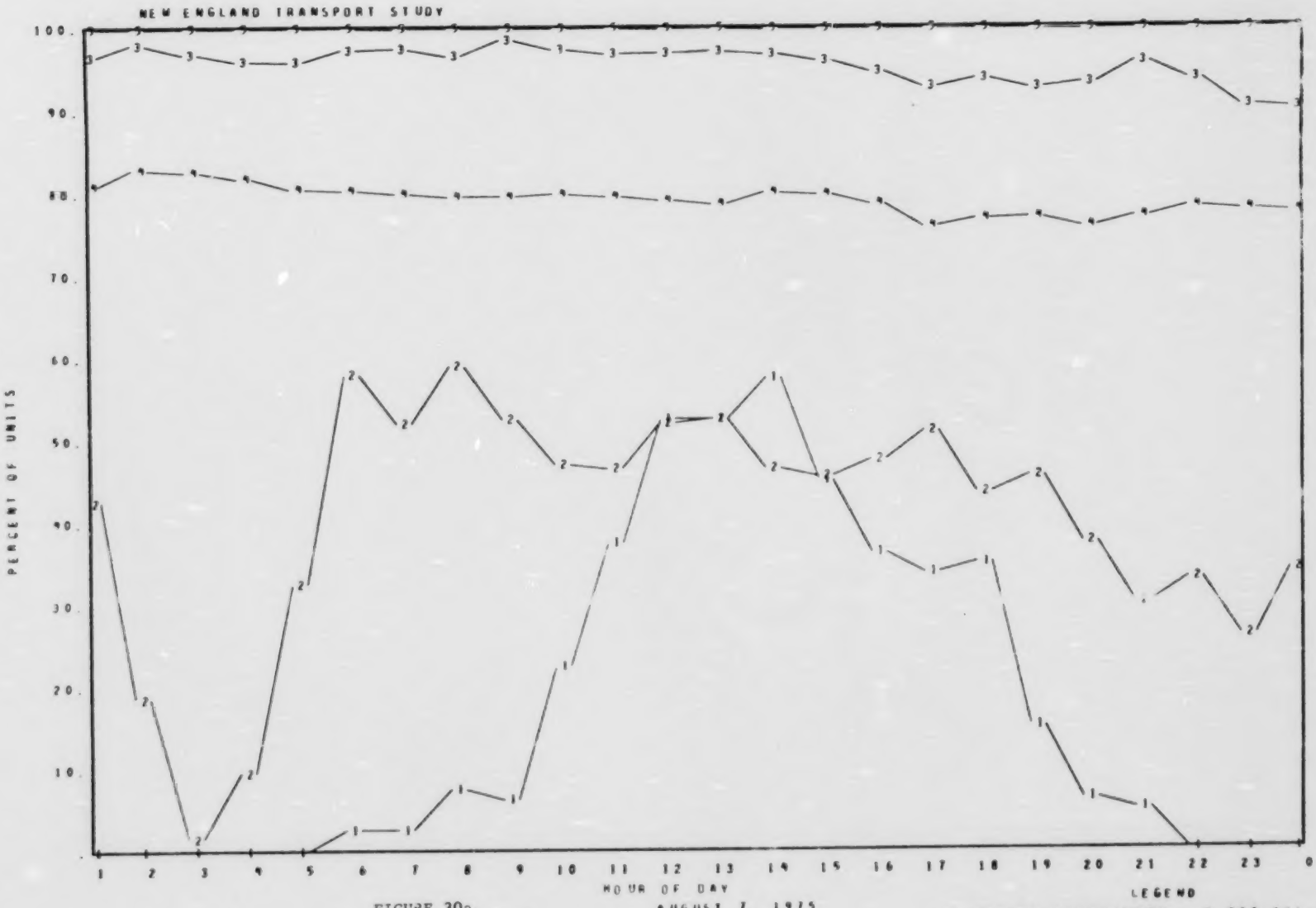
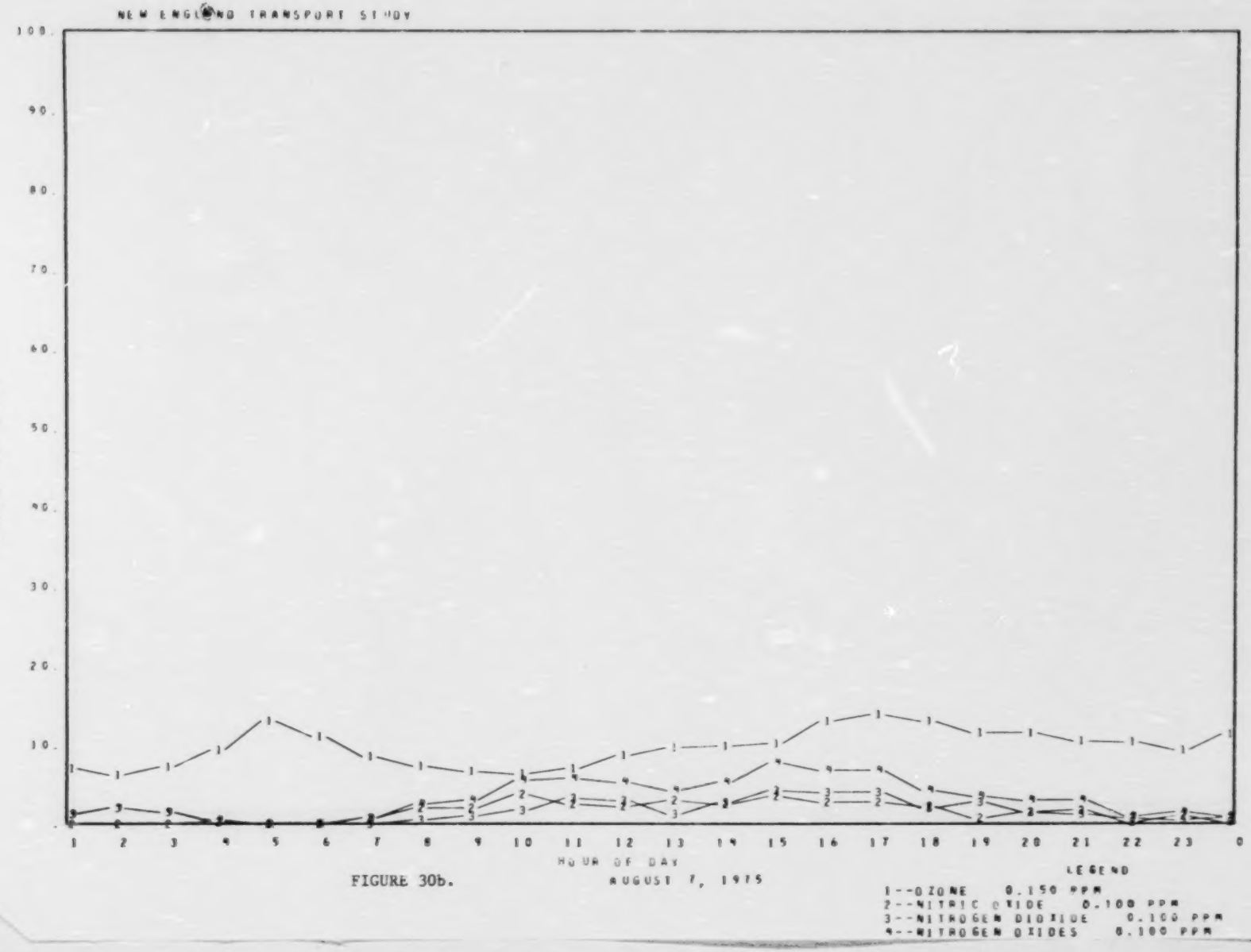

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 7, 1975
LEGEND
1--GLOBAL IRRADIANCE 2.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 20.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 30a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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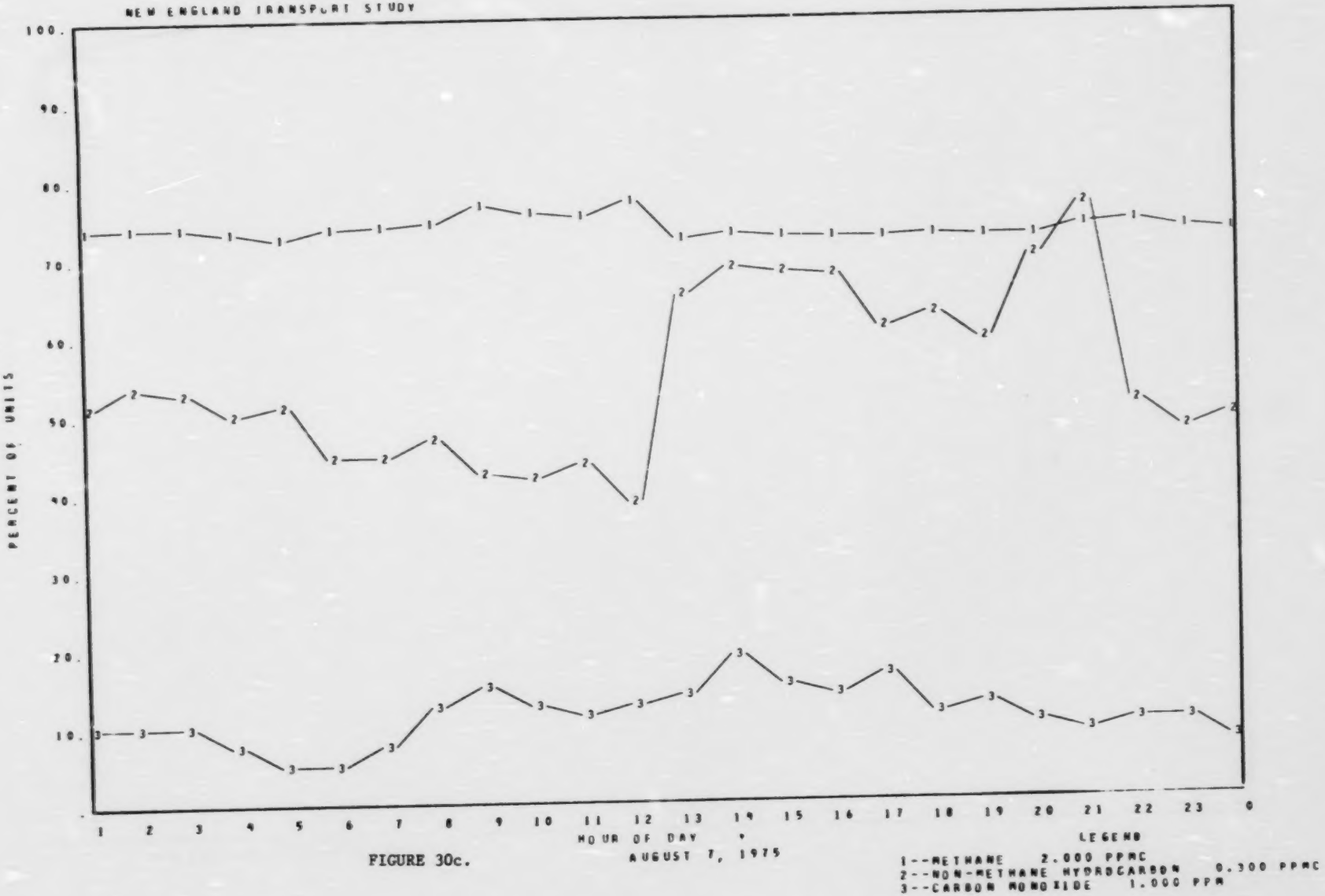
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 7, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 30b.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PERCENT OF UNITS
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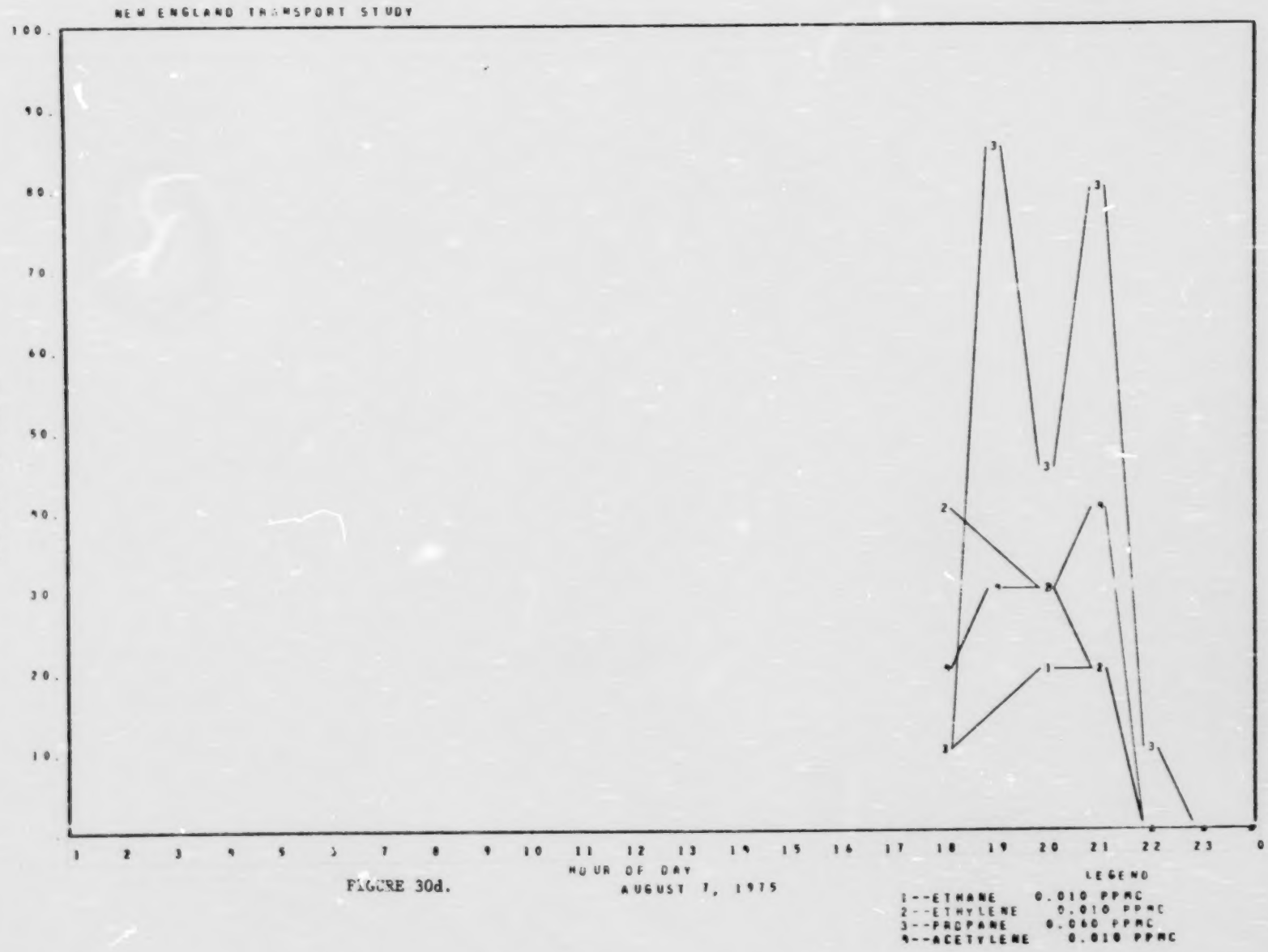
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 7, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 0.300 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 30c.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
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80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 7, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.060 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 30d.

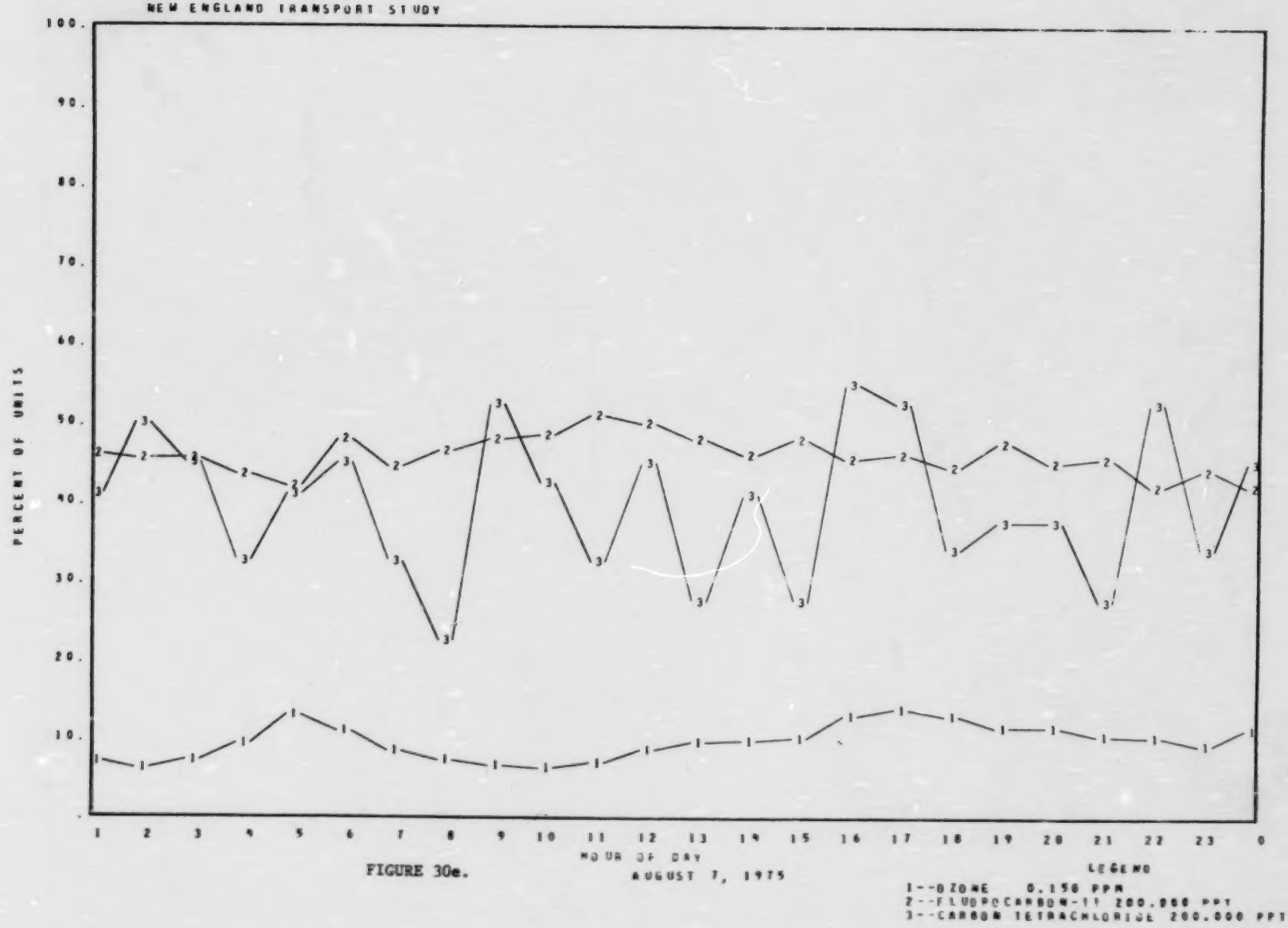
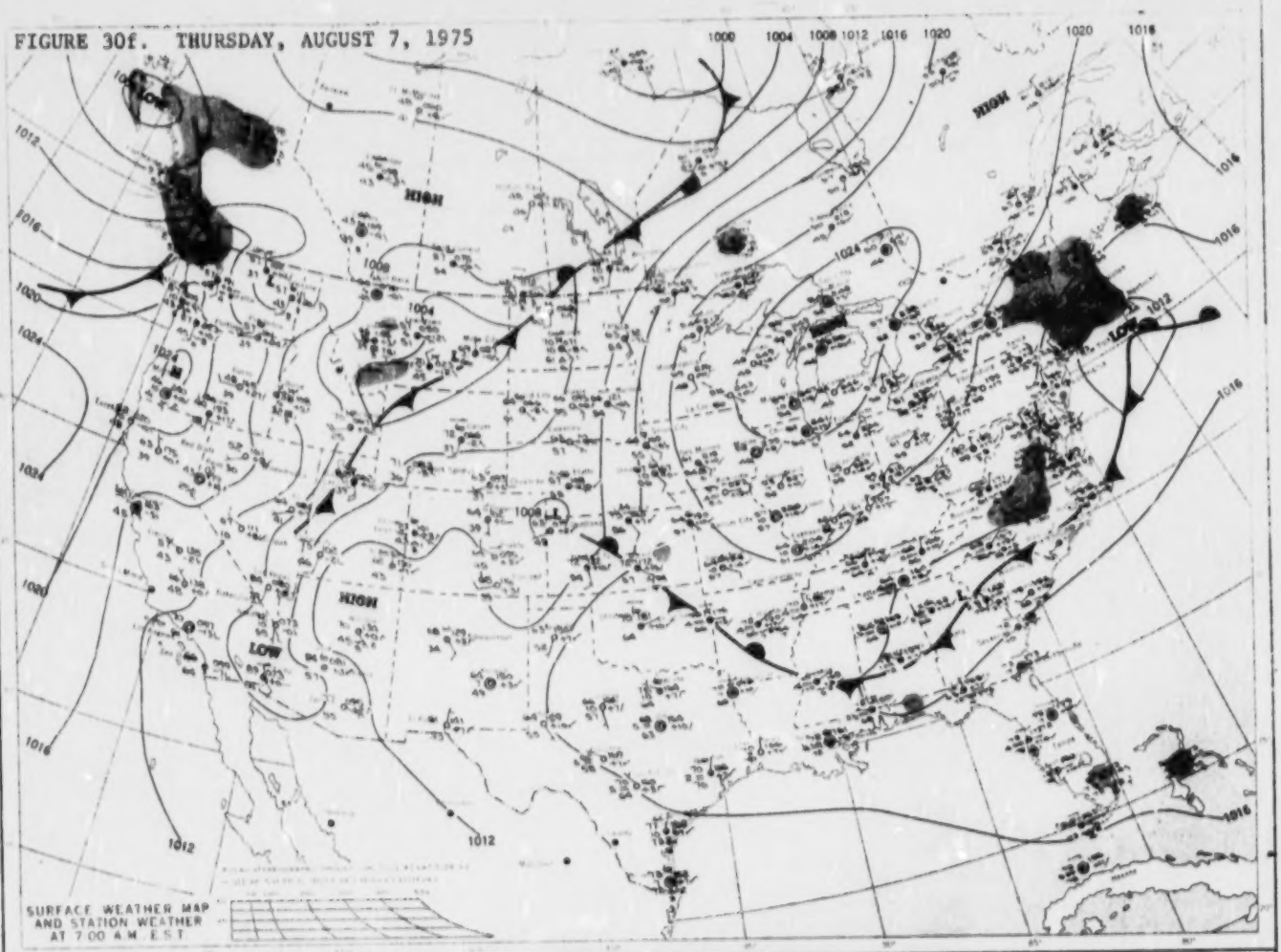

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 7, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 30e.

FIGURE 30f. THURSDAY, AUGUST 7, 1975



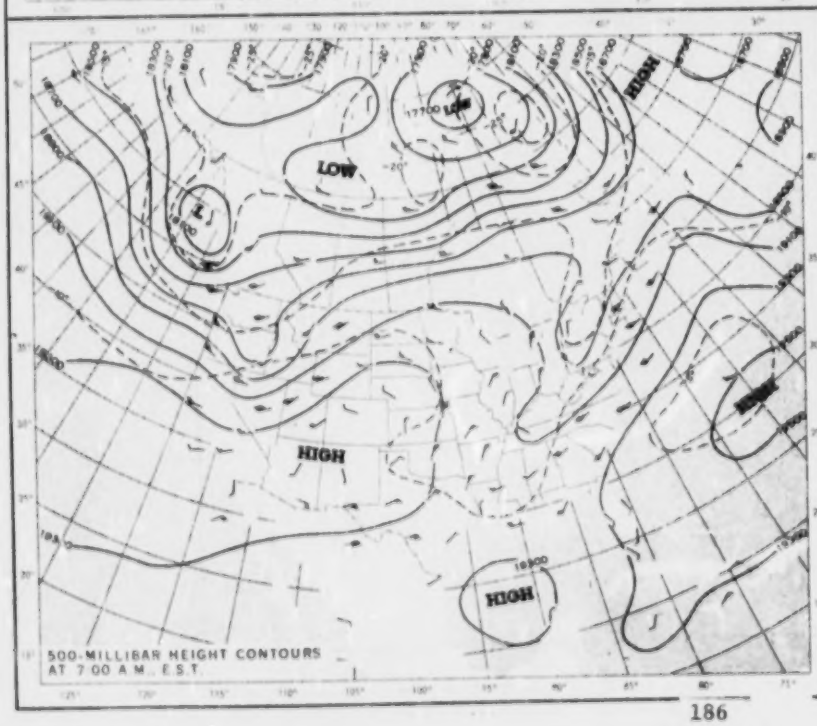


TABLE 27a. AUGUST 8, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.645	24
2--WIND SPEED (MPH)	4.879	24
3--WIND DIRECTION (DEGREES)	304.845	24
4--TEMPERATURE (CENTIGRADE)	17.814	24
5--RELATIVE HUMIDITY (PERCENT)	99.786	24
6--OZONE (PPM)	0.011	24
7--NITRIC OXIDE (PPM)	0.006	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.009	24
10--METHANE (PPMC)	1.860	24
11--NON-METHANE HYDROCARBON (PPMC)	0.117	24
12--CARBON MONOXIDE (PPM)	0.240	23
13--ETHANE (PPMC)	0.001	13
14--ETHYLENE (PPMC)	0.004	12
15--PROPANE (PPMC)	0.007	12
16--ACETYLENE (PPMC)	0.004	13
19--FLUOROCARBON-11 (PPT)	105.	24
20--CARBON TETRACHLORIDE (PPT)	83.	23

TABLE 27b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 8, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.250	0.200	0.650	0.725	0.375	0.850
2--WIND SPEED (MPH)	4.300	3.600	3.400	5.100	6.300	5.100	5.400	5.400	7.200	7.900	6.200	[illegible]
3--WIND DIRECTION (DEGREES)	306.	305.	303.	312.	322.	332.	338.	333.	329.	331.	326.	325.
4--TEMPERATURE (CENTIGRADE)	16.	16.	16.	16.	16.	16.	16.	17.	17.	17.	17.	17.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.019	0.019	0.016	0.015	0.017	0.018	0.015	0.011	0.011	0.014	0.012	0.013
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	0.002	0.006	0.006	0.004	0.007	0.005
8--NITROGEN DIOXIDE (PPM)	0.001	.000	.000	.000	.000	0.000	0.002	0.003	0.003	0.002	0.001	0.006
9--NITROGEN OXIDES (PPM)	0.001	.000	.000	.000	.000	0.000	0.004	0.009	0.008	0.006	0.008	0.011
10--METHANE (PPMC)	1.456	1.478	1.490	1.513	1.516	1.535	1.576	1.586	1.593	1.588	[illegible]	1.608
11--NON-METHANE HYDROCARBON (PPMC)	0.123	0.100	0.096	0.067	0.071	0.052	0.067	0.081	0.043	0.043	0.068	0.065
12--CARBON MONOXIDE (PPM)	0.050	0.087	0.063	0.075	0.050	-0.047	0.125	0.375	0.200	0.175	0.187	0.162
13--ETHANE (PPMC)	0.001	.000	.000	.000	.000	.000	0.001	.000	-0.001	-0.003	-0.004	0.00
14--ETHYLENE (PPMC)	0.001	.000	.000	.000	.000	0.001	0.010	0.002	-0.002	-0.001	-0.001	-0.00
15--PROPANE (PPMC)	.000	.000	.000	.000	.000	0.005	0.030	0.011	-0.008	-0.005	-0.003	.00
16--ACETYLENE (PPMC)	0.002	.000	.000	.000	.000	.000	0.018	0.002	-0.003	-0.003	-0.004	0.00
19--FLUOROCARBON-11 (PPT)	89.	88.	89.	85.	91.	85.	86.	87.	101.	90.	97.	94.
20--CARBON TETRACHLORIDE (PPT)	68.	80.	98.	60.	70.	83.	60.	113.	83.	55.	113.	70.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.625	0.425	1.075	4.775	3.100	1.325	0.675	0.275	0.100	0.050	.000	.000
2--WIND SPEED (MPH)	6.600	7.000	5.500	8.900	8.900	3.400	1.900	1.400	1.600	1.500	1.[illegible]	[illegible].000
3--WIND DIRECTION (DEGREES)	327.	329.	342.	347.	344.	317.	348.	219.	211.	228.	245	201.
4--TEMPERATURE (CENTIGRADE)	17.	18.	18.	21.	22.	21.	21.	20.	19.	18.	17.	17.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6--OZONE (PPM)	0.012	0.011	0.010	0.017	0.018	0.011	0.007	0.004	0.000	.000	.000	.000
7--NITRIC OXIDE (PPM)	0.005	0.007	0.008	0.004	0.003	0.008	0.006	0.007	0.015	0.026	0.017	0.018
8--NITROGEN DIOXIDE (PPM)	0.002	0.003	0.002	0.002	0.003	0.002	0.004	0.005	0.007	0.006	0.005	0.006
9--NITROGEN OXIDES (PPM)	0.007	0.009	0.010	0.006	0.006	0.011	0.010	0.011	0.022	0.032	0.022	0.024
10--METHANE (PPMC)	1.603	1.598	1.610	1.586	1.611	1.598	1.556	2.400	2.845	3.990	2.696	2.854
11--NON-METHANE HYDROCARBON (PPMC)	0.037	0.045	0.063	0.053	0.052	0.093	0.057	0.218	0.370	0.230	0.465	0.244
12--CARBON MONOXIDE (PPM)	0.175	0.283	0.187	0.150	0.175	0.262	0.162	0.237	0.587	0.662	0.450	0.637
13--ETHANE (PPMC)	.000	-0.000	-0.001	-0.001	-0.001	-0.002	-0.002	-0.002	-0.003	0.003	0.001	0.002
14--ETHYLENE (PPMC)	.000	-0.002	-0.003	-0.003	-0.006	-0.008	-0.009	-0.011	-0.012	0.014	0.007	0.008
15--PROPANE (PPMC)	.000	-0.002	-0.005	-0.007	-0.009	-0.012	-0.014	-0.016	-0.019	0.021	-0.016	0.012
16--ACETYLENE (PPMC)	.000	-0.001	-0.003	-0.004	-0.005	-0.007	-0.008	-0.009	-0.011	0.012	0.005	0.007
19--FLUOROCARBON-11 (PPT)	90.	91.	94.	87.	98.	97.	95.	104.	121.	203.	202.	158.
20--CARBON TETRACHLORIDE (PPT)	135.	75.	110.	98.	80.	75.	45.	55.	98.	85.	98.	-1.

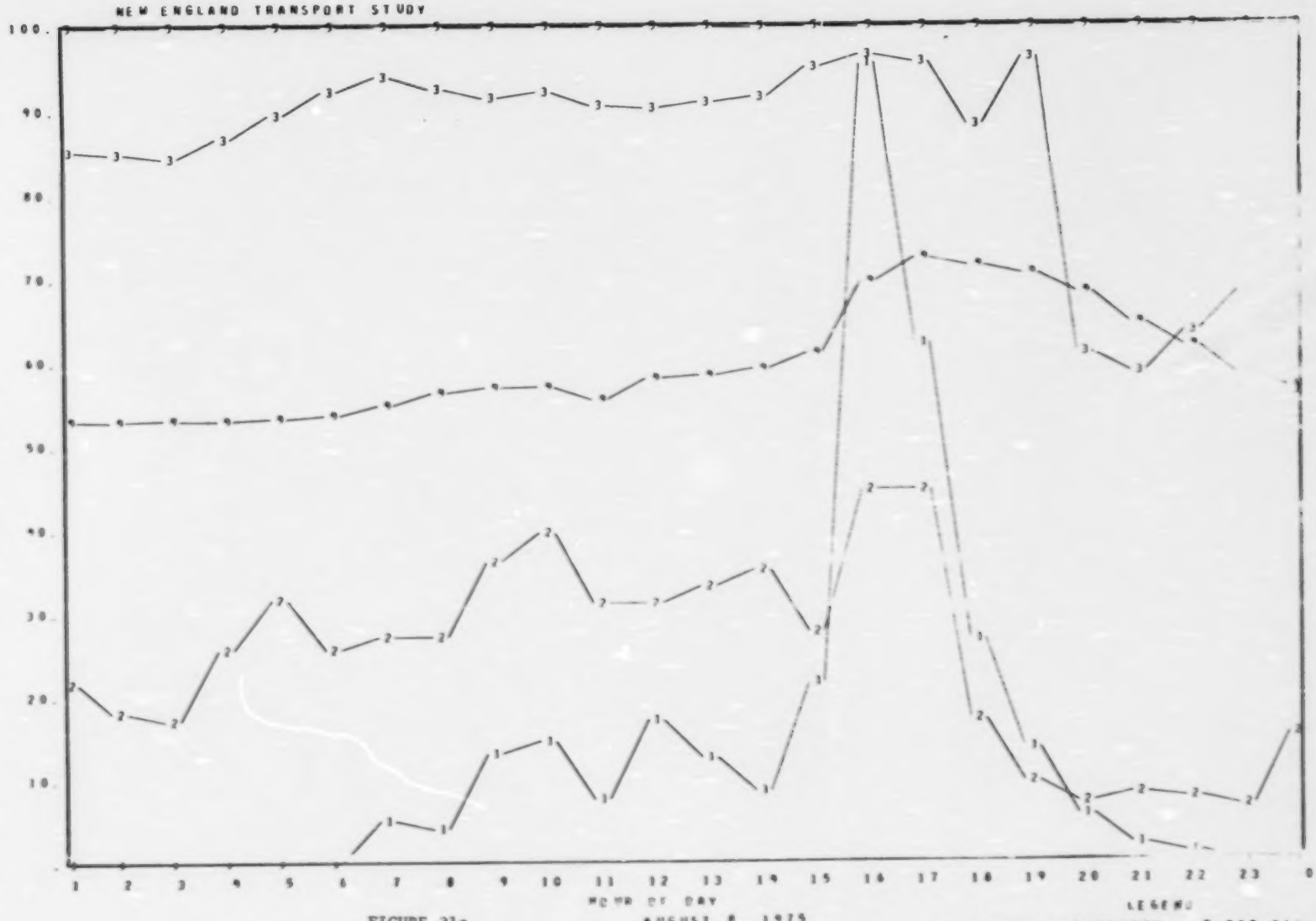

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 8, 1975
LEGEND
1--GLOBAL IRRADIANCE 5.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 31a.

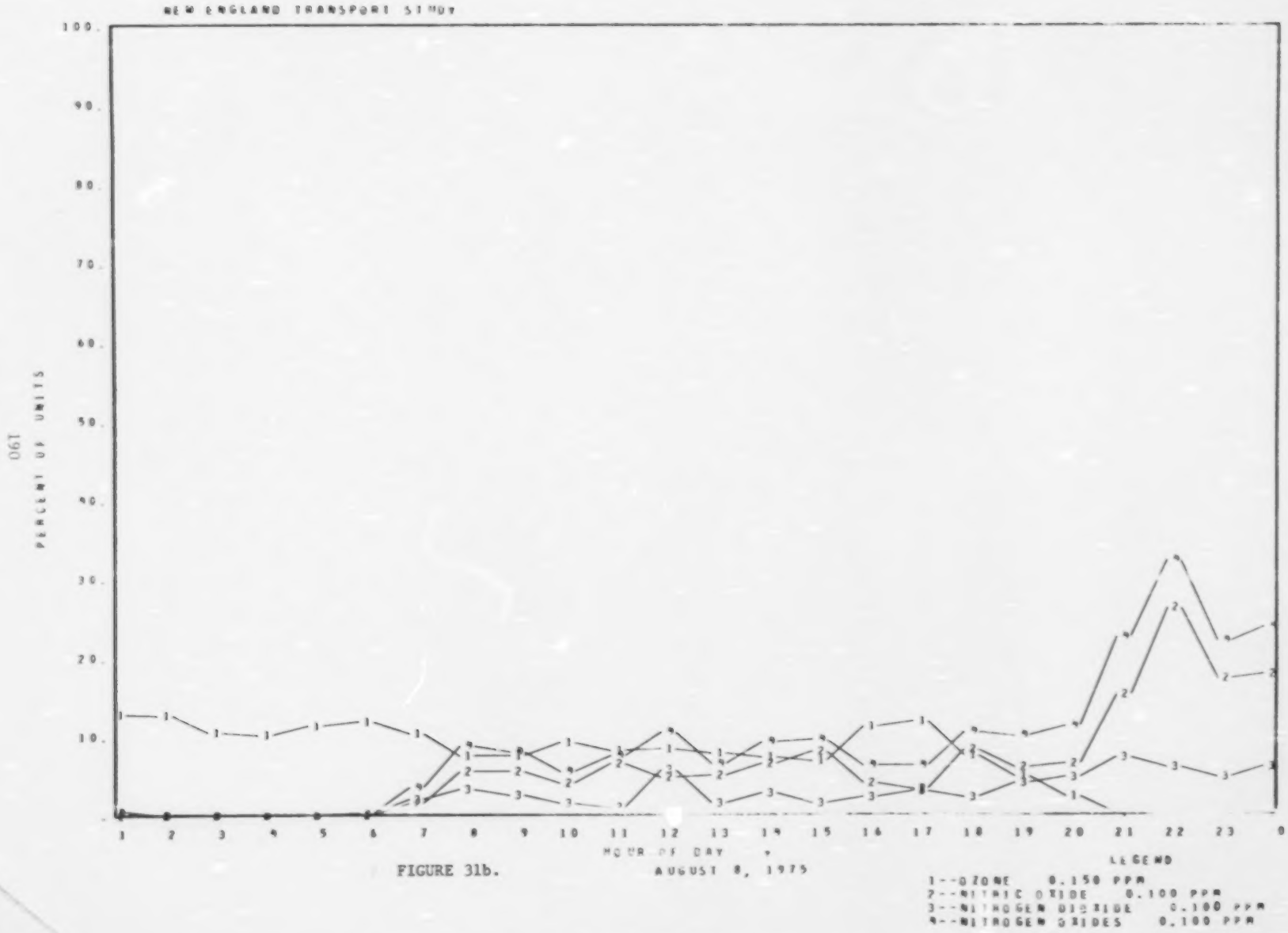

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 8, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 31b.

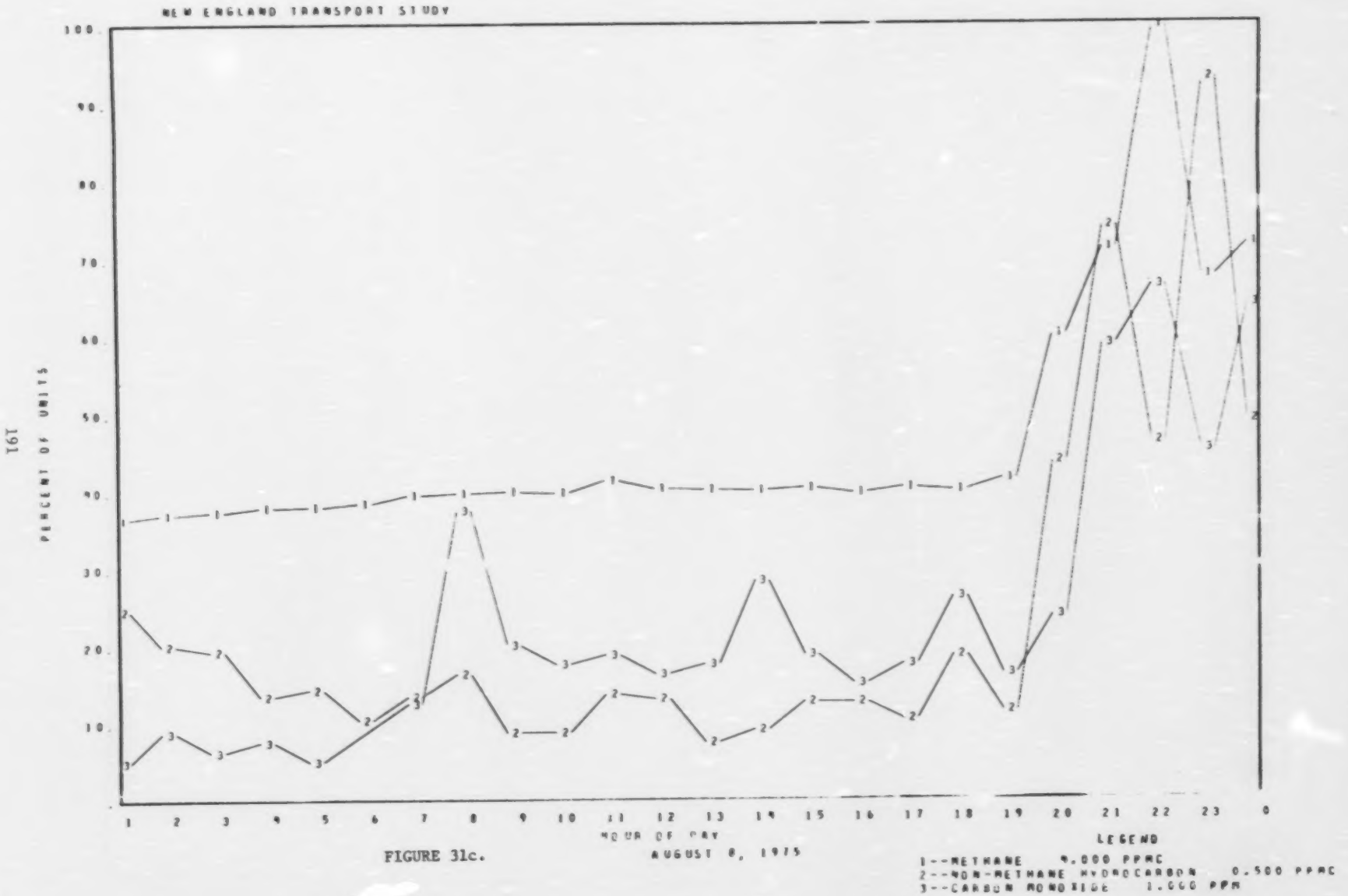

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 8, 1975
LEGEND
1--METHANE 9.000 PPMC
2--NON-METHANE HYDROCARBON 0.500 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 31c.

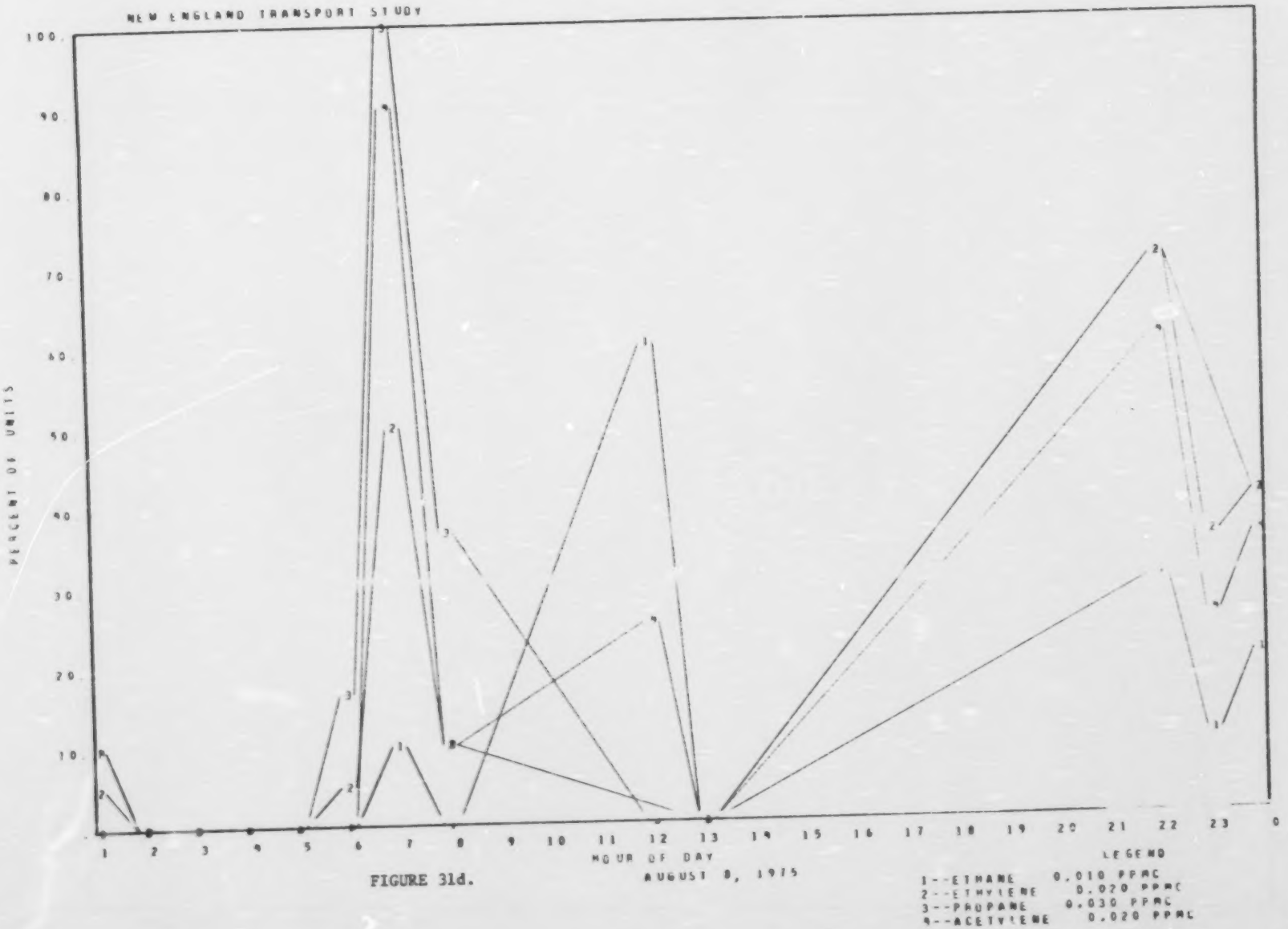

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 8, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.030 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 31d.

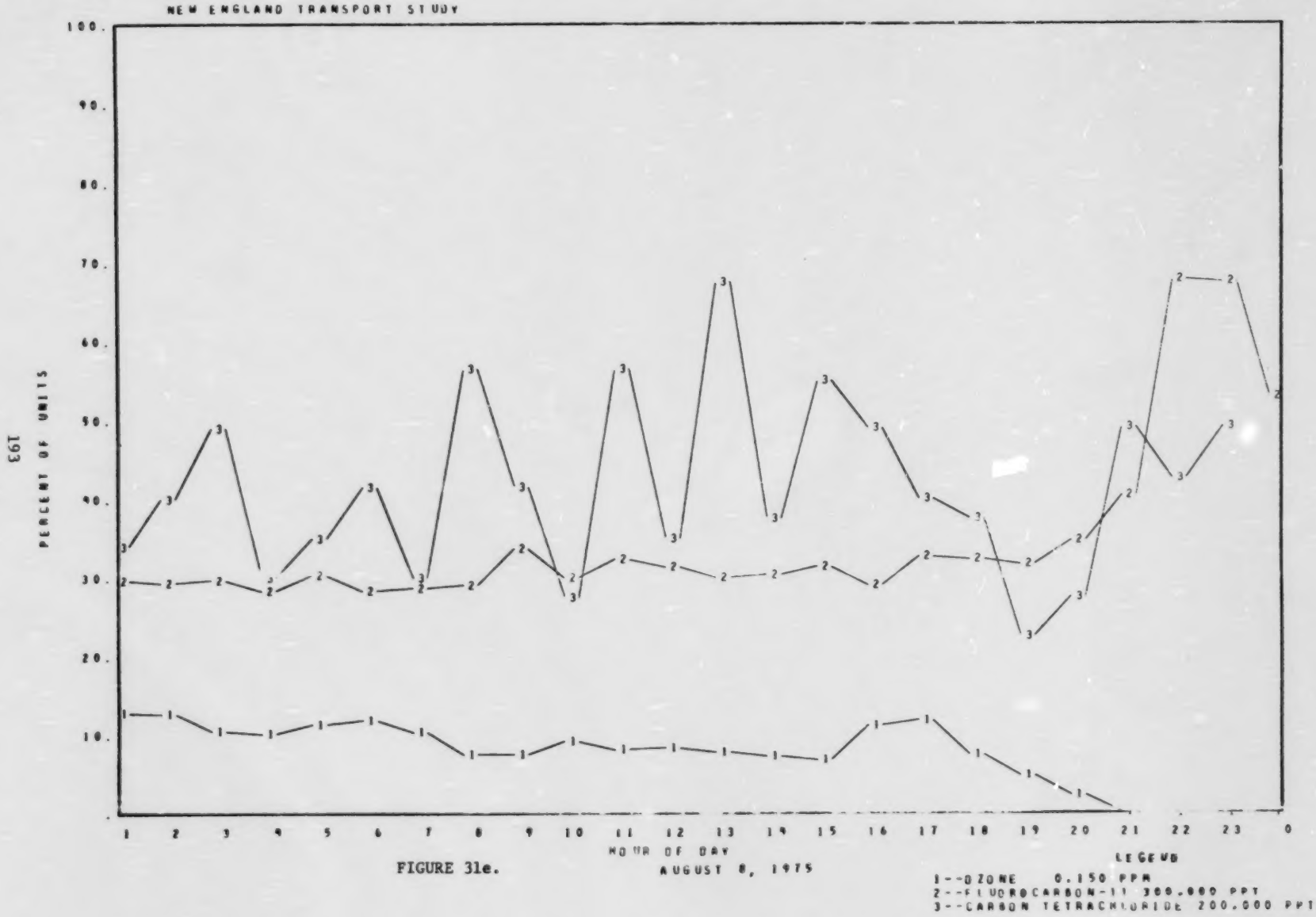
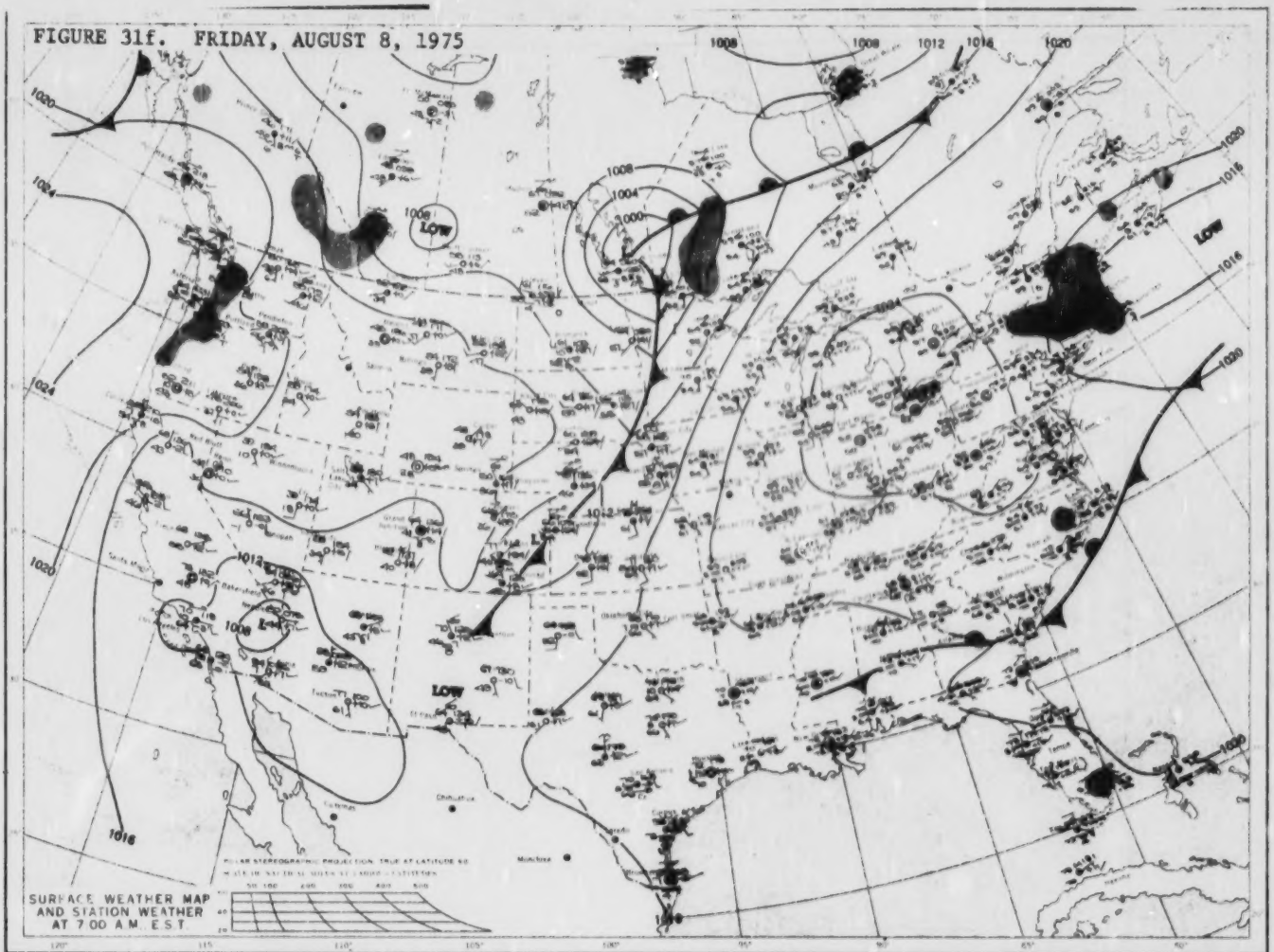

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 8, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 31e.

FIGURE 31f. FRIDAY, AUGUST 8, 1975



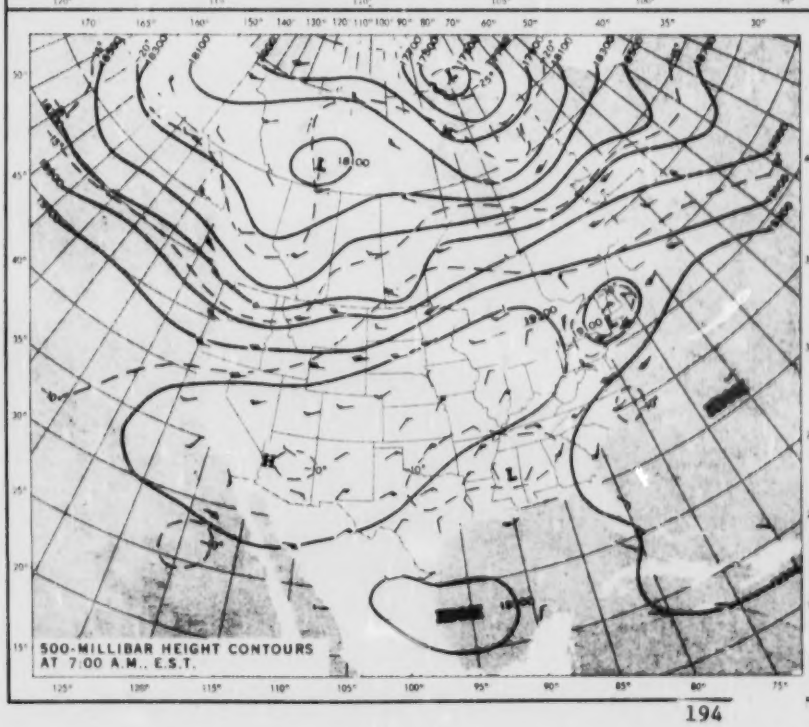


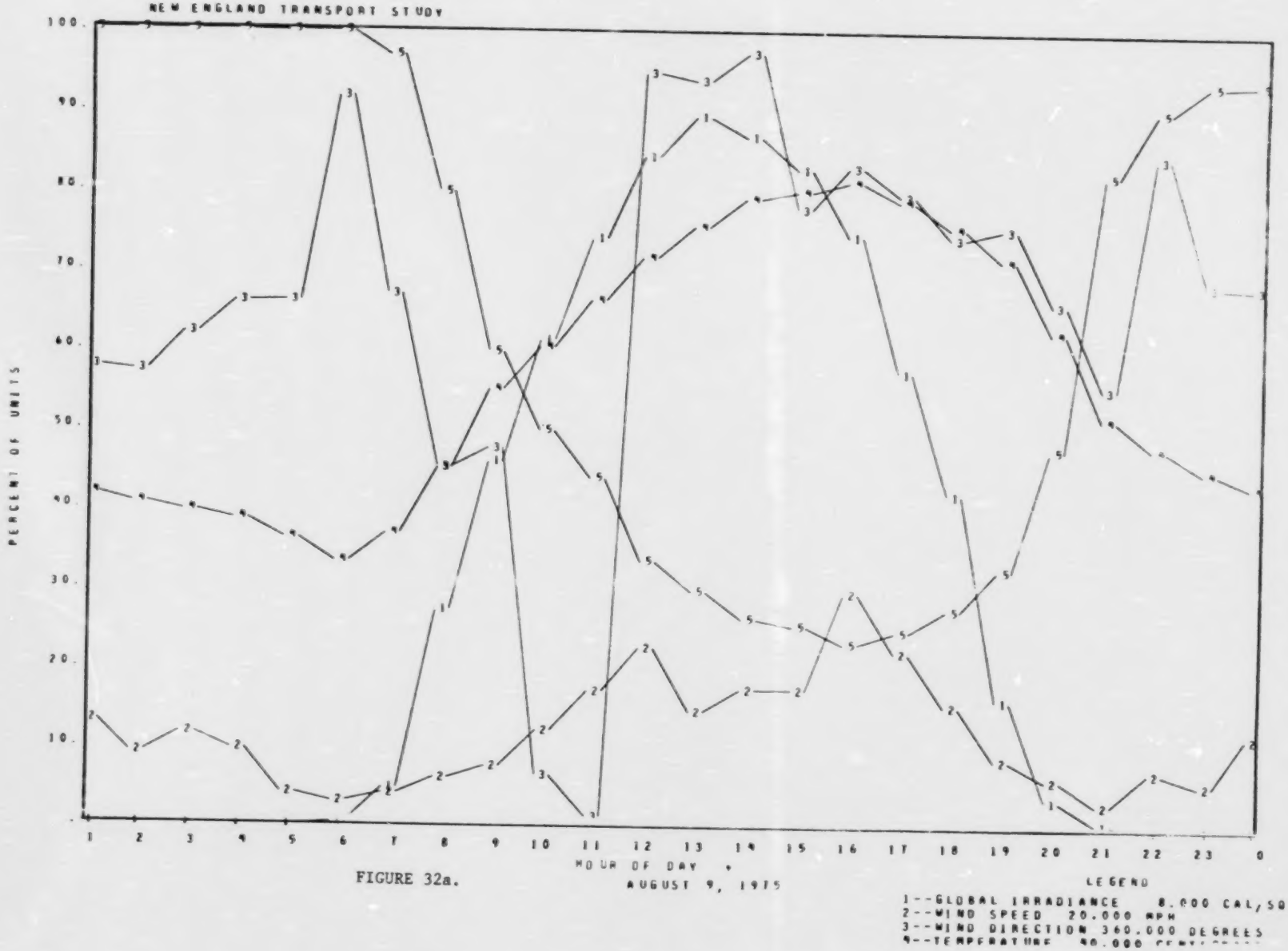
TABLE 28a. AUGUST 9, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.501	24
2--WIND SPEED (MPH)	2.302	24
3--WIND DIRECTION (DEGREES)	237.736	24
4--TEMPERATURE (CENTIGRADE)	22.582	24
5--RELATIVE HUMIDITY (PERCENT)	64.877	24
6--OZONE (PPM)	0.022	24
7--NITRIC OXIDE (PPM)	0.006	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.011	24
10--METHANE (PPMC)	2.120	24
11--NON-METHANE HYDROCARBON (PPMC)	0.256	24
12--CARBON MONOXIDE (PPM)	0.340	24
13--ETHANE (PPMC)	0.002	15
14--ETHYLENE (PPMC)	0.006	15
16--ACETYLENE (PPMC)	0.005	15
19--FLUOROCARBON-11 (PPT)	129.	24
20--CARBON TETRACHLORIDE (PPT)	97.	21

TABLE 28b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 9, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.375	2.175	3.675	4.900	5.925	6.750
2--WIND SPEED (MPH)	2.600	1.800	2.300	1.900	0.800	0.600	0.800	1.200	1.500	2.400	3.400	4.500
3--WIND DIRECTION (DEGREES)	207.	206.	223.	237.	237.	330.	241.	163.	171.	23.	4.	341.
4--TEMPERATURE (CENTIGRADE)	17.	16.	16.	15.	14.	13.	15.	18.	22.	24.	26.	29.
5--RELATIVE HUMIDITY (PERCENT)	100.	100.	100.	100.	100.	100.	97.	80.	60.	50.	44.	33.
6--OZONE (PPM)	.000	.000	.000	.000	.000	.000	0.000	0.005	0.014	0.024	0.036	0.044
7--NITRIC OXIDE (PPM)	0.018	0.007	0.006	0.003	0.003	0.007	0.008	0.002	0.001	0.001	0.003	0.005
8--NITROGEN DIOXIDE (PPM)	0.007	0.007	0.006	0.006	0.005	0.003	0.003	0.002	0.003	0.003	0.005	0.001
9--NITROGEN OXIDES (PPM)	0.025	0.014	0.013	0.009	0.009	0.010	0.011	0.004	0.003	0.004	0.008	0.005
10--METHANE (PPMC)	2.096	2.286	1.845	1.736	2.531	2.044	4.405	3.674	2.058	1.693	1.659	1.611
11--NON-METHANE HYDROCARBON (PPMC)	0.228	0.170	0.178	0.149	0.280	0.259	0.558	0.117	0.015	0.193	0.172	0.17
12--CARBON MONOXIDE (PPM)	0.662	0.412	0.437	0.362	0.375	0.487	0.412	0.350	0.187	0.625	0.137	0.11
13--ETHANE (PPMC)	0.001	0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	0.002	0.002	0.002	0.00
14--ETHYLENE (PPMC)	0.010	0.008	-0.008	-0.007	-0.007	-0.006	-0.006	-0.005	0.005	0.007	0.004	0.00
16--ACETYLENE (PPMC)	0.009	0.009	-0.008	-0.008	-0.007	-0.007	-0.006	-0.006	0.005	0.007	0.004	0.00
19--FLUOROCARBON-11 (PPT)	149.	150.	127.	122.	139.	133.	224.	133.	110.	102.	106.	92.
20--CARBON TETRACHLORIDE (PPT)	143.	113.	120.	120.	128.	95.	120.	90.	60.	68.	120.	98.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.150	6.950	6.625	5.950	4.575	3.350	1.275	0.275	0.050	.000	.000	.000
2--WIND SPEED (MPH)	2.900	3.450	3.450	5.900	4.400	3.050	1.700	1.200	0.600	1.400	1.10	2.[illegible]
3--WIND DIRECTION (DEGREES)	338.	350.	280.	299.	286.	267.	271.	237.	199.	304.	24[illegible]	[illegible]5.
4--TEMPERATURE (CENTIGRADE)	30.	32.	32.	33.	31.	30.	29.	25.	21.	19.	18.	17.
5--RELATIVE HUMIDITY (PERCENT)	30.	26.	25.	23.	24.	27.	32.	48.	82.	90.	94.	94.
6--OZONE (PPM)	0.049	0.046	0.051	0.055	0.057	0.059	0.053	0.029	0.005	0.003	0.000	.000
7--NITRIC OXIDE (PPM)	0.001	0.001	0.004	0.006	0.008	0.006	0.004	0.006	0.009	0.007	0.011	0.010
8--NITROGEN DIOXIDE (PPM)	0.003	0.004	0.003	0.001	0.003	0.004	0.005	0.010	0.010	0.012	0.012	0.016
9--NITROGEN OXIDES (PPM)	0.004	0.005	0.007	0.007	0.011	0.010	0.008	0.016	0.019	0.019	0.023	0.026
10--METHANE (PPMC)	1.578	1.580	1.636	1.553	1.600	1.539	1.576	1.878	2.213	1.954	3.906	2.221
11--NON-METHANE HYDROCARBON (PPMC)	0.214	0.357	0.287	0.222	0.150	0.192	0.205	0.532	0.242	0.528	0.200	0.413
12--CARBON MONOXIDE (PPM)	0.200	0.200	0.087	0.087	0.075	0.075	0.162	0.275	0.550	0.600	0.512	0.762
13--ETHANE (PPMC)	0.001	0.001	0.003	-0.002	0.001	-0.001	-0.001	0.001	0.001	0.002	0.003	0.001
14--ETHYLENE (PPMC)	0.005	0.007	0.004	-0.002	0.001	-0.002	-0.002	0.003	0.003	0.007	0.011	0.008
16--ACETYLENE (PPMC)	0.003	0.007	0.004	-0.002	0.001	-0.002	-0.003	0.004	0.004	0.007	0.008	0.008
19--FLUOROCARBON-11 (PPT)	96.	105.	103.	105.	112.	103.	105.	112.	128.	157.	204.	168.
20--CARBON TETRACHLORIDE (PPT)	50.	-55.	60.	83.	113.	-101.	90.	90.	-86.	83.	120.	83.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PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 9, 1975
LEGEND
1--GLOBAL IRRADIANCE 8.000 CAL/SQ.CM/M
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000

FIGURE 32a.

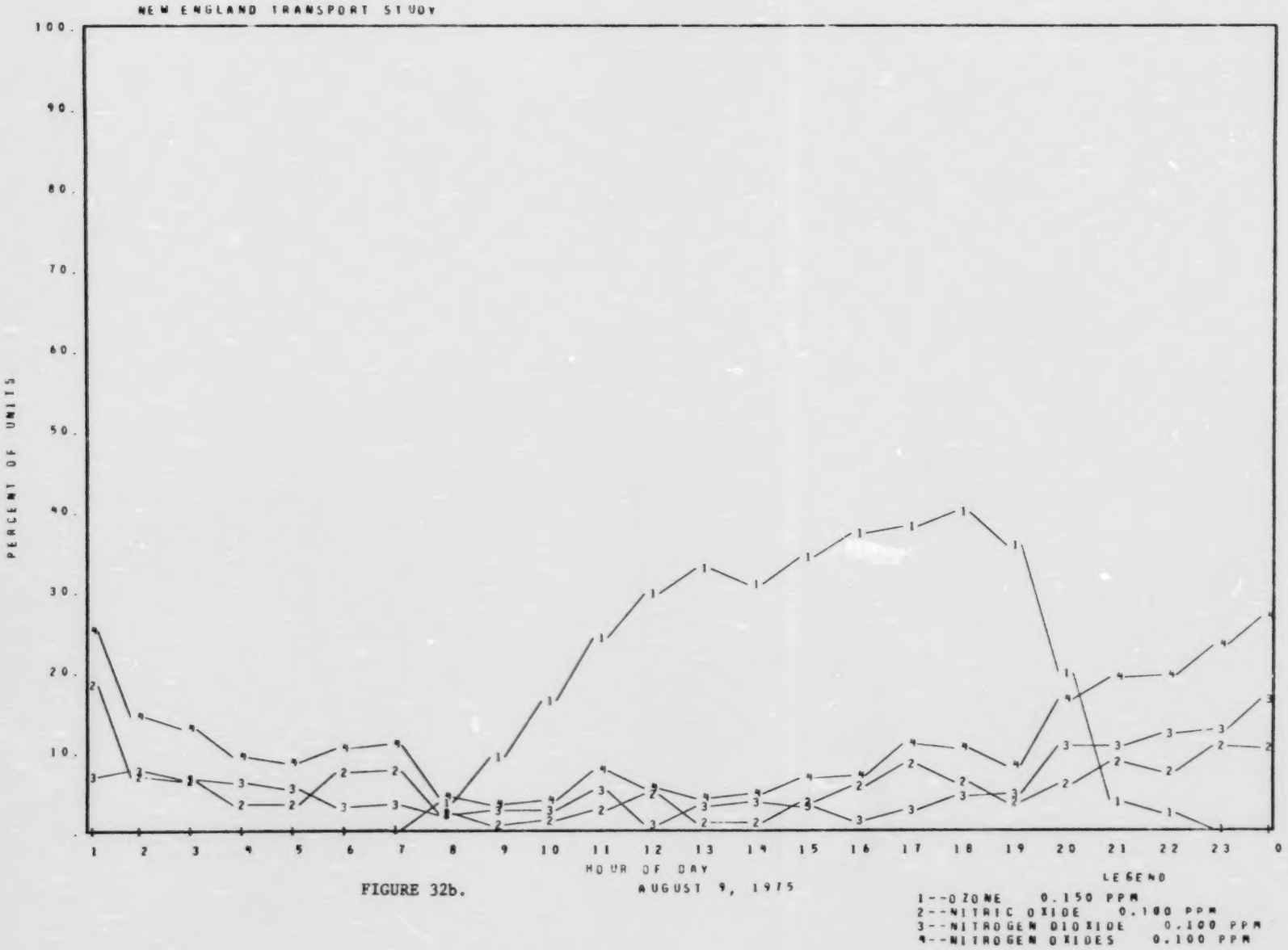
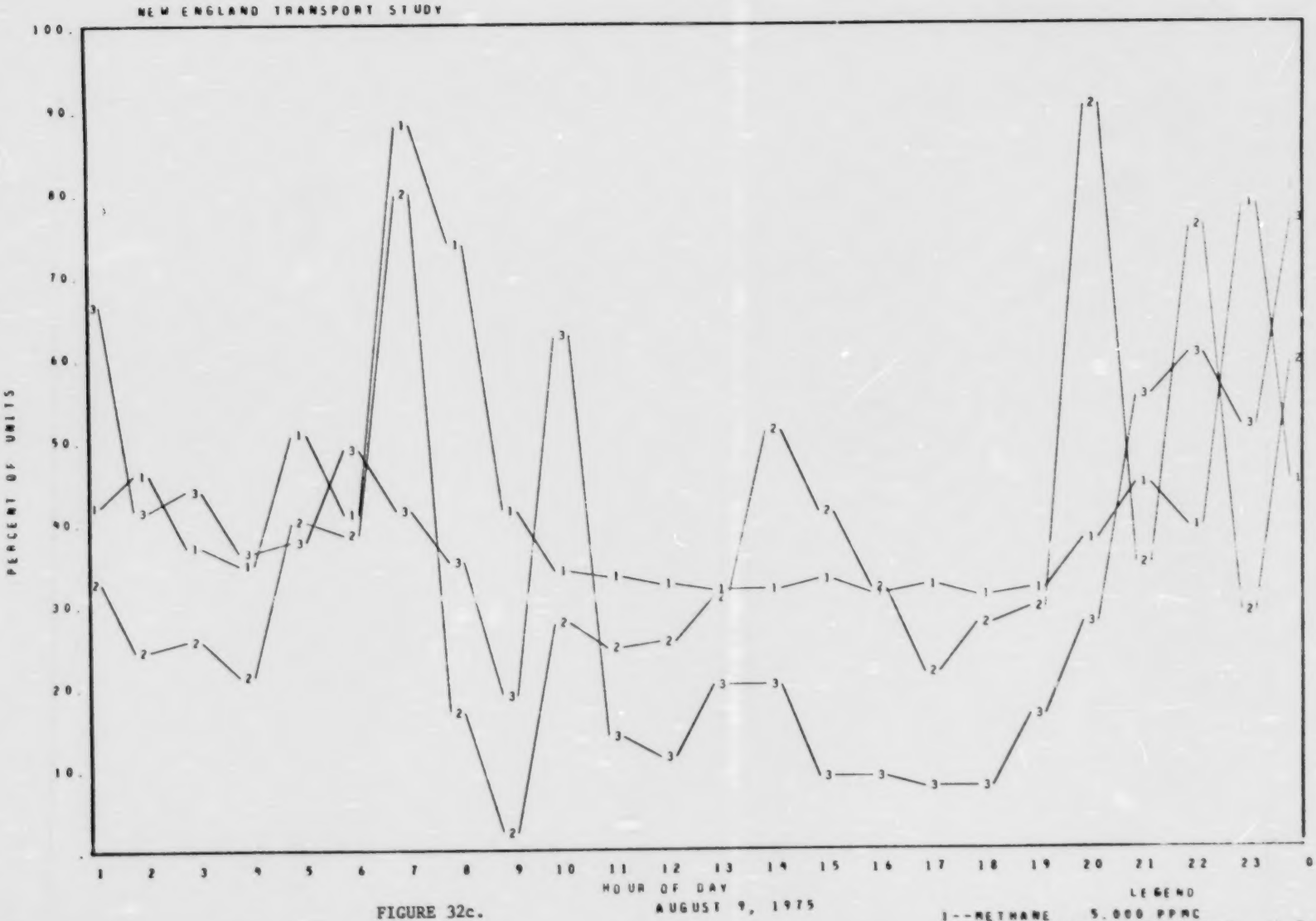

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 9, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 32b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 9, 1975
LEGEND
1--METHANE 5.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 32c.

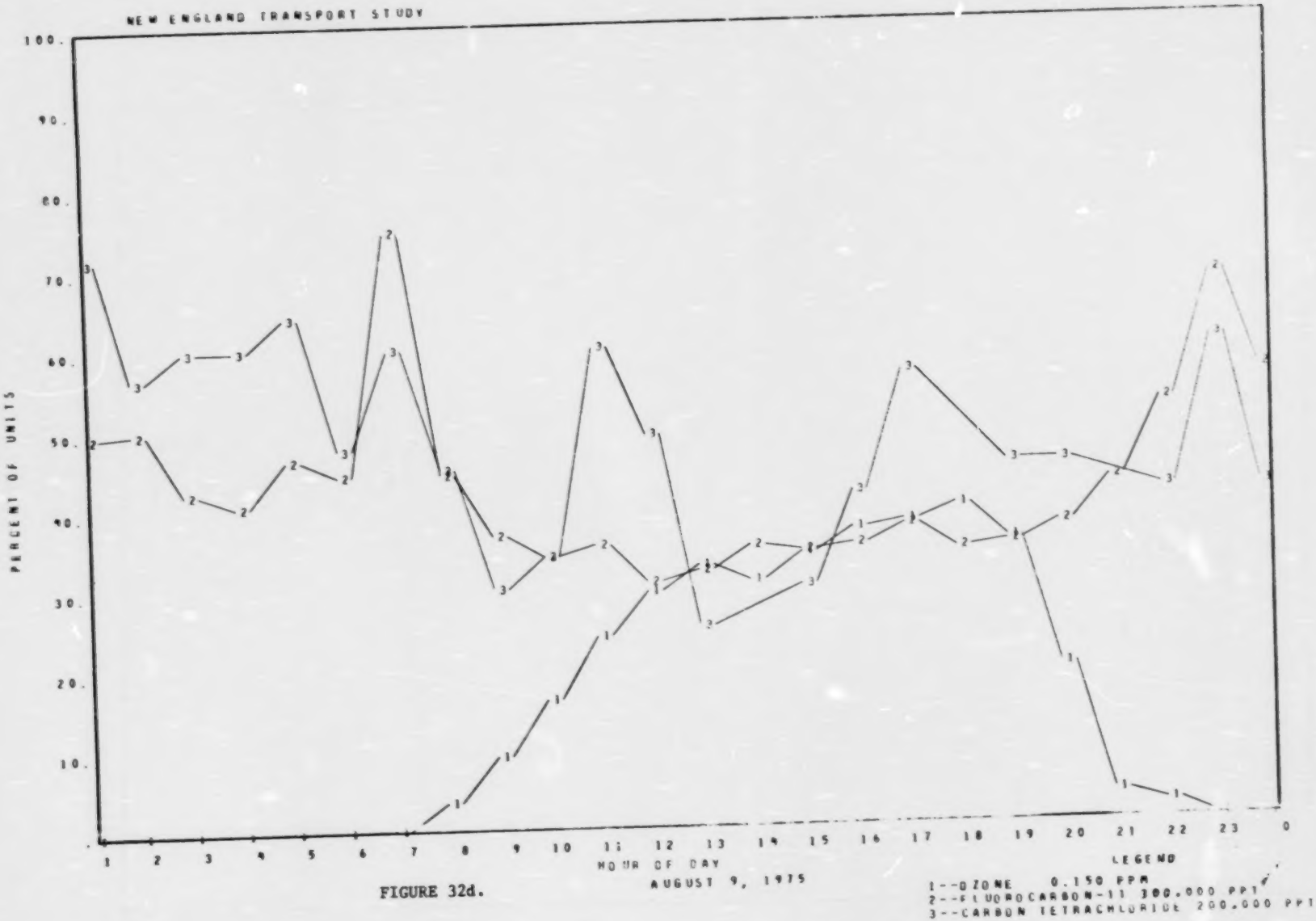
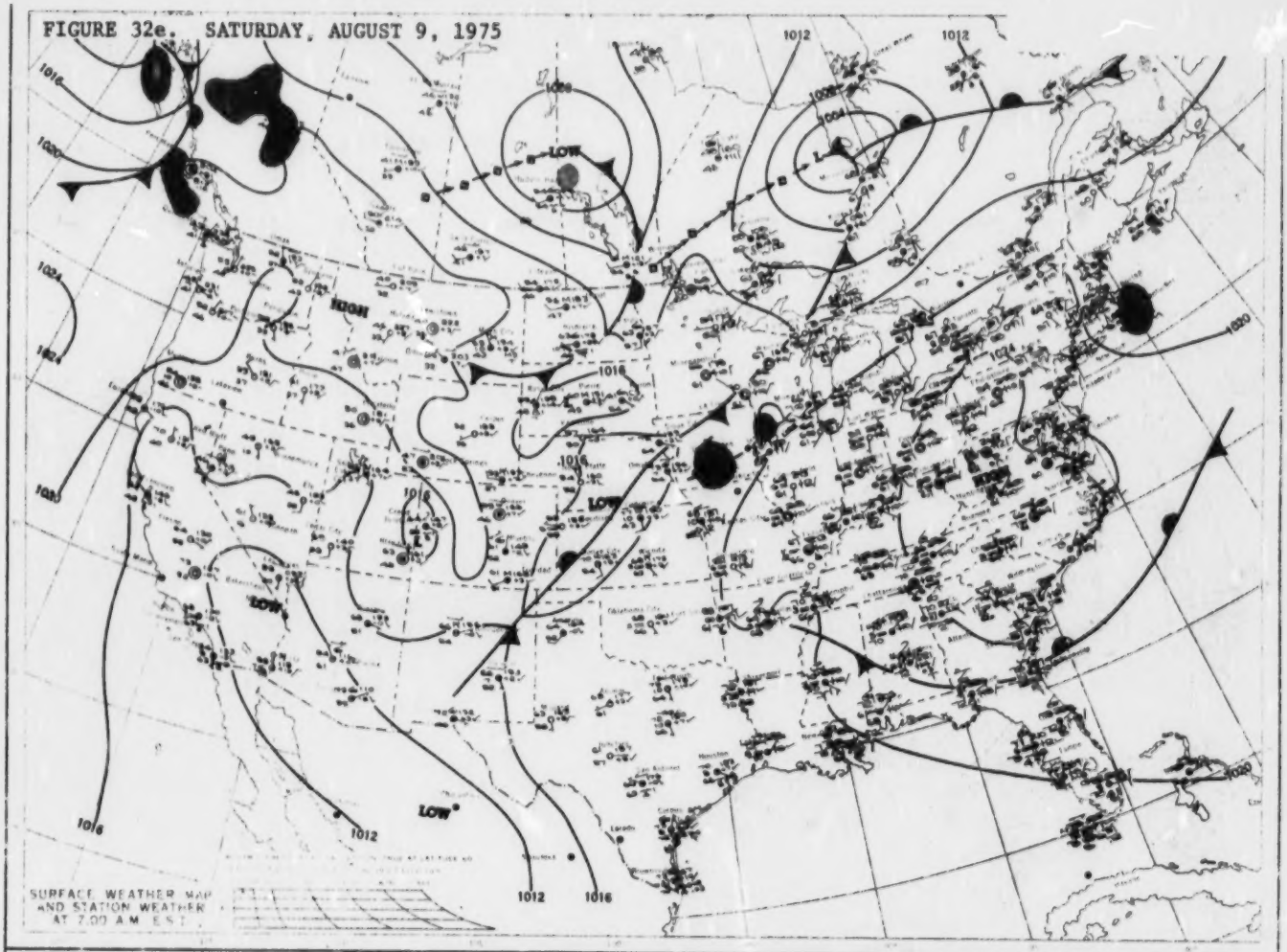

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 9, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 32d.

FIGURE 32e. SATURDAY, AUGUST 9, 1975



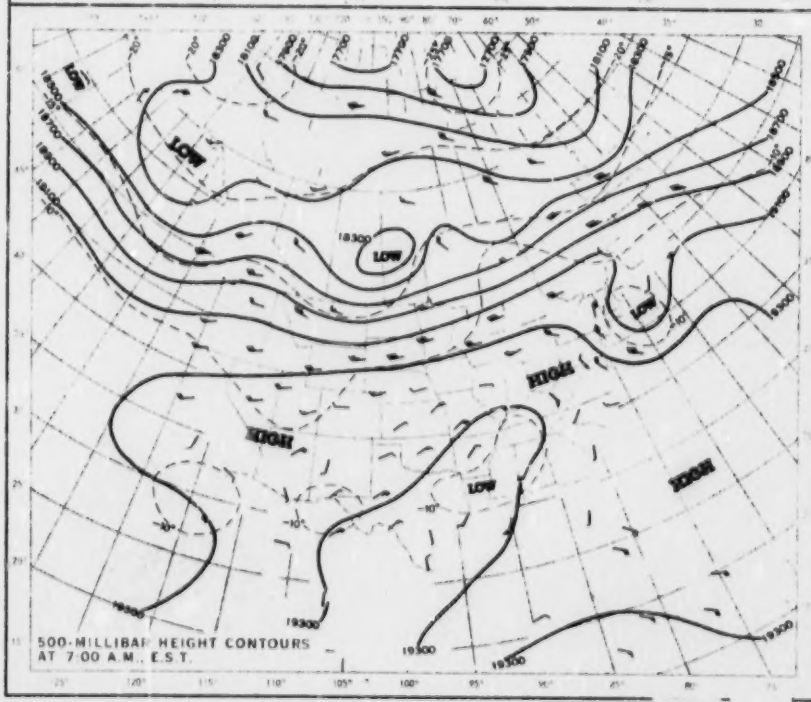


TABLE 29a. AUGUST 10, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.911	24
2--WIND SPEED (MPH)	2.429	24
3--WIND DIRECTION (DEGREES)	244.087	24
4--TEMPERATURE (CENTIGRADE)	23.544	24
5--RELATIVE HUMIDITY (PERCENT)	68.678	24
6--OZONE (PPM)	0.033	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.959	24
11--NON-METHANE HYDROCARBON (PPMC)	0.298	24
12--CARBON MONOXIDE (PPM)	0.254	23
13--ETHANE (PPMC)	0.003	23
14--ETHYLENE (PPMC)	0.005	23
15--PROPANE (PPMC)	0.012	22
16--ACETYLENE (PPMC)	0.004	23
19--FLUOROCARBON-11 (PPT)	115.	12
20--CARBON TETRACHLORIDE (PPT)	76.	12

TABLE 29b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 10, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.225	1.500	2.800	3.850	5.375	6.300
2--WIND SPEED (MPH)	2.400	2.200	1.800	1.500	0.900	1.100	1.700	2.700	4.200	3.600	4.100	5.100
3--WIND DIRECTION (DEGREES)	229.	197.	287.	327.	346.	287.	246.	199.	195.	186.	175.	154.
4--TEMPERATURE (CENTIGRADE)	17.	16.	15.	14.	14.	14.	15.	18.	21.	25.	28.	31.
5--RELATIVE HUMIDITY (PERCENT)	92.	93.	94.	95.	96.	97.	93.	85.	72.	57.	46.	41.
6--OZONE (PPM)	0.003	0.006	0.002	.000	.000	.000	0.002	0.009	0.027	0.036	0.050	0.065
7--NITRIC OXIDE (PPM)	0.005	0.001	0.002	0.001	0.001	.000	0.003	0.000	.000	.000	0.000	0.001
8--NITROGEN DIOXIDE (PPM)	0.015	0.012	0.010	0.006	0.004	0.004	0.003	0.003	0.003	0.003	0.002	0.003
9--NITROGEN OXIDES (PPM)	0.020	0.013	0.012	0.007	0.005	0.004	0.005	0.003	0.003	0.003	0.003	0.004
10--METHANE (PPMC)	1.725	2.603	2.380	1.716	1.718	1.913	1.863	2.786	2.111	2.013	1.733	1.661
11--NON-METHANE HYDROCARBON (PPMC)	0.271	0.415	0.291	0.233	0.322	0.273	0.221	0.174	0.187	0.152	0.187	0.225
12--CARBON MONOXIDE (PPM)	0.625	0.412	0.387	0.313	0.250	0.313	0.287	0.250	0.275	0.237	0.150	0.175
13--ETHANE (PPMC)	0.001	0.001	0.001	0.002	0.001	0.002	-0.002	0.003	0.002	0.002	0.002	0.003
14--ETHYLENE (PPMC)	0.018	0.006	0.005	0.006	0.008	0.002	-0.003	0.005	0.003	0.003	0.004	0.002
15--PROPANE (PPMC)	0.017	0.011	0.018	0.050	0.071	-0.052	-0.032	0.013	0.010	0.006	0.005	0.012
16--ACETYLENE (PPMC)	0.013	0.005	0.005	0.004	0.002	0.004	-0.003	0.003	0.004	0.004	0.002	0.004
19--FLUOROCARBON-11 (PPT)	144.	161.	133.	124.	-122.	-121.	-119.	-118.	116.	105.	94.	100.
20--CARBON TETRACHLORIDE (PPT)	113.	110.	129.	90.	-87.	-84.	-91.	-78.	75.	.	83.	30.
	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.425	5.450	3.900	5.125	2.050	1.425	0.975	0.375	0.100	.000	.000	.000
2--WIND SPEED (MPH)	3.700	4.100	3.200	3.400	2.100	2.200	2.200	1.700	1.000	1.400	1.300	0.700
3--WIND DIRECTION (DEGREES)	258.	269.	255.	261.	267.	239.	238.	239.	251.	296.	191.	265.
4--TEMPERATURE (CENTIGRADE)	32.	32.	31.	32.	31.	30.	29.	27.	25.	24.	23.	22.
5--RELATIVE HUMIDITY (PERCENT)	37.	37.	40.	39.	43.	48.	51.	57.	70.	85.	88.	92.
6--OZONE (PPM)	0.086	0.090	0.082	0.074	0.064	0.058	0.053	0.052	0.026	0.009	0.003	0.000
7--NITRIC OXIDE (PPM)	0.001	0.002	0.001	0.003	0.005	0.004	0.004	0.005	0.004	0.004	0.004	0.006
8--NITROGEN DIOXIDE (PPM)	0.003	0.002	0.001	0.002	0.003	0.004	0.005	0.007	0.010	0.008	0.011	0.008
9--NITROGEN OXIDES (PPM)	0.004	0.004	0.002	0.005	0.008	0.008	0.008	0.011	0.014	0.012	0.015	0.014
10--METHANE (PPMC)	1.600	1.659	1.603	1.599	1.587	1.608	1.623	1.601	2.801	2.163	2.693	2.271
11--NON-METHANE HYDROCARBON (PPMC)	0.275	0.273	0.245	0.282	0.329	0.285	0.313	0.312	0.445	0.542	0.480	0.420
12--CARBON MONOXIDE (PPM)	0.125	0.137	0.075	0.087	0.117	0.237	0.112	0.150	0.275	0.350	0.500	-1.000
13--ETHANE (PPMC)	0.003	0.004	0.003	0.004	0.003	0.003	0.004	0.004	0.004	0.004	0.004	0.002
14--ETHYLENE (PPMC)	0.002	0.002	0.004	0.003	0.003	0.001	0.003	0.003	0.007	0.007	0.008	0.009
15--PROPANE (PPMC)	.000	.000	.000	.000	.000	.000	0.005	0.005	.000	0.006	0.008	0.008
16--ACETYLENE (PPMC)	0.002	0.004	0.002	0.006	0.004	0.002	0.003	0.003	0.005	0.007	0.008	0.005
19--FLUOROCARBON-11 (PPT)	117.	96.	98.	98.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.
20--CARBON TETRACHLORIDE (PPT)	75.	90.	30.	90.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.

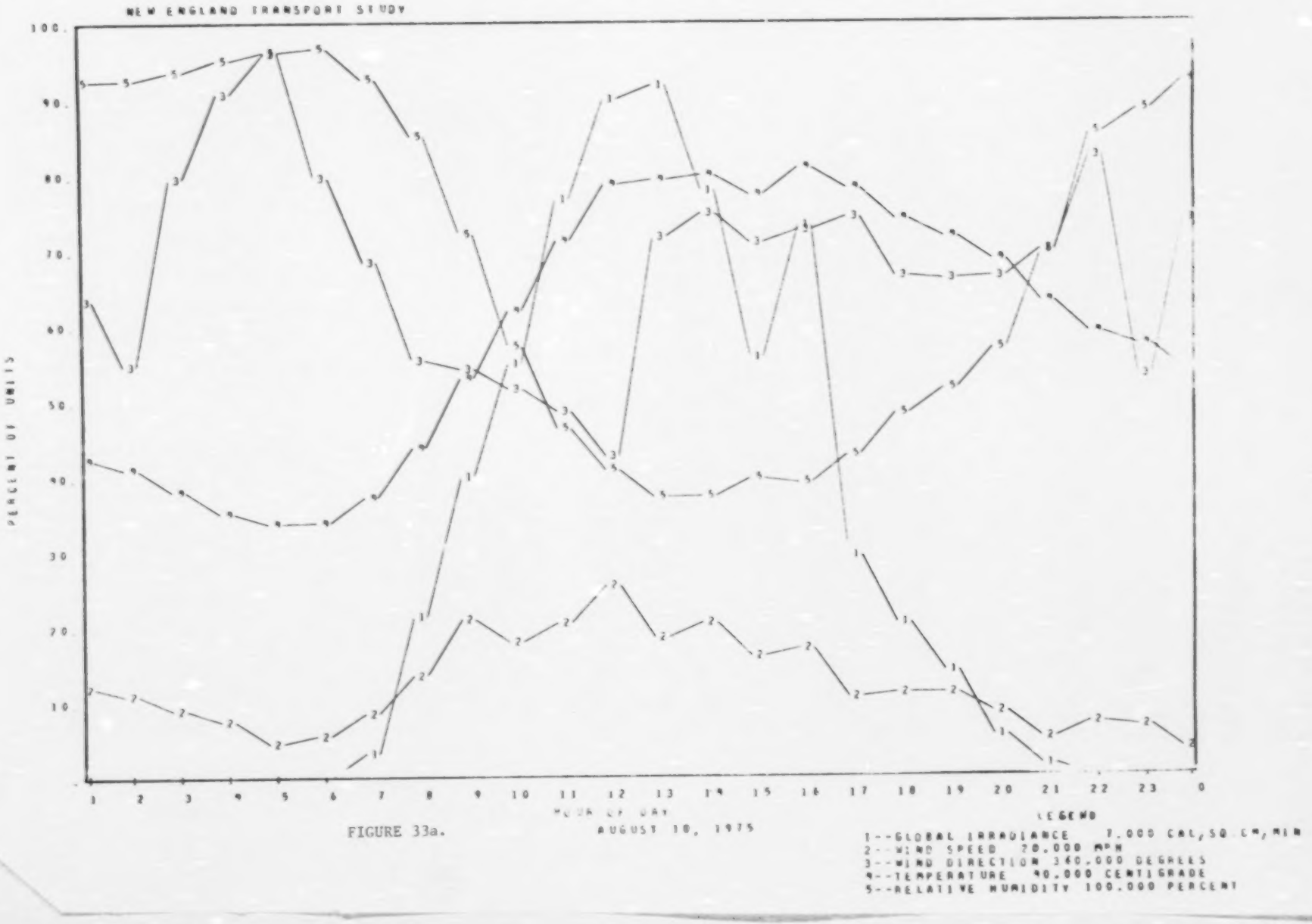

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 10, 1975
LEGEND
1--GLOBAL IRRADIANCE 1.000 CAL/SQ CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 33a.

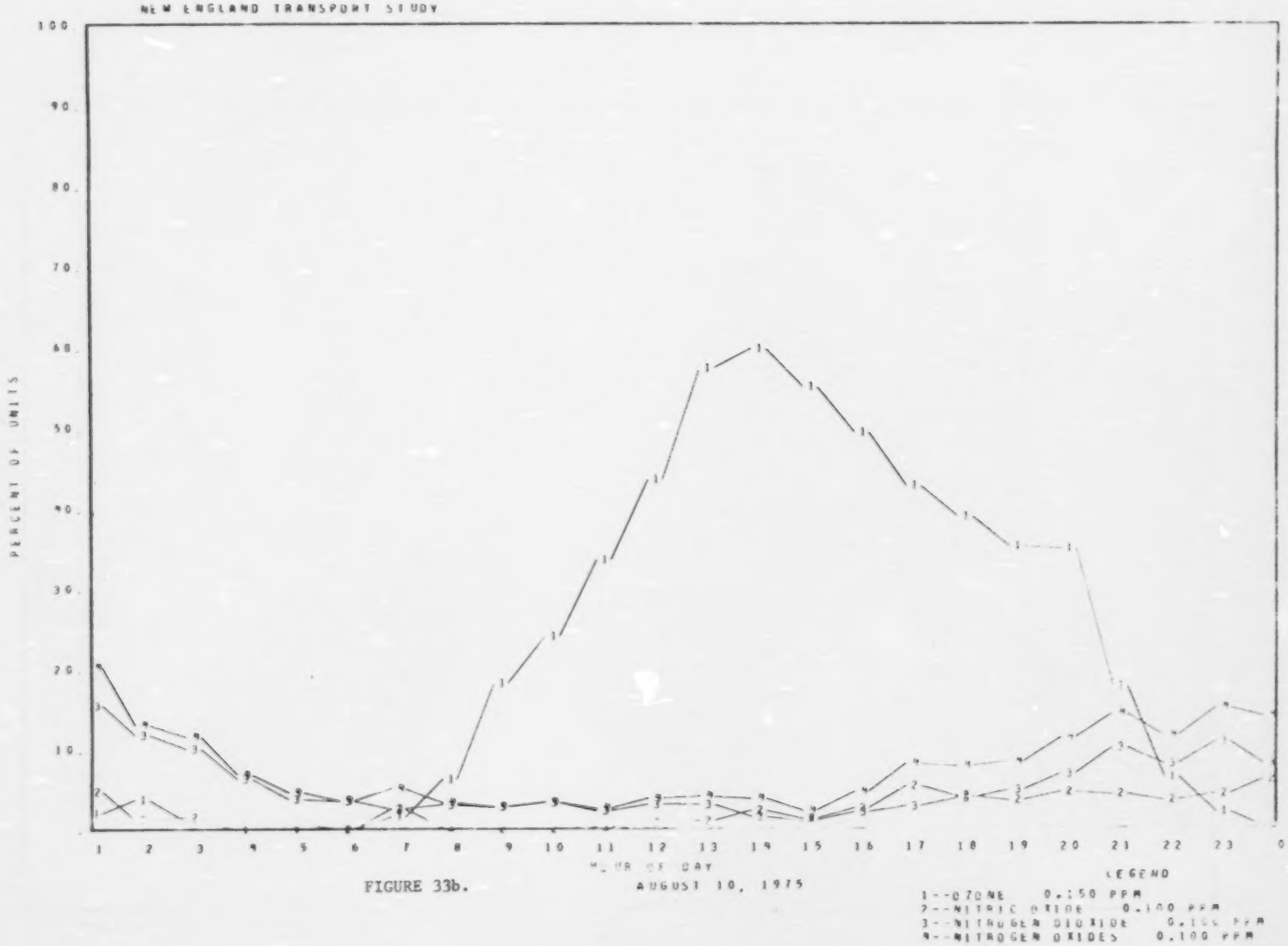

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 10, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 33b.

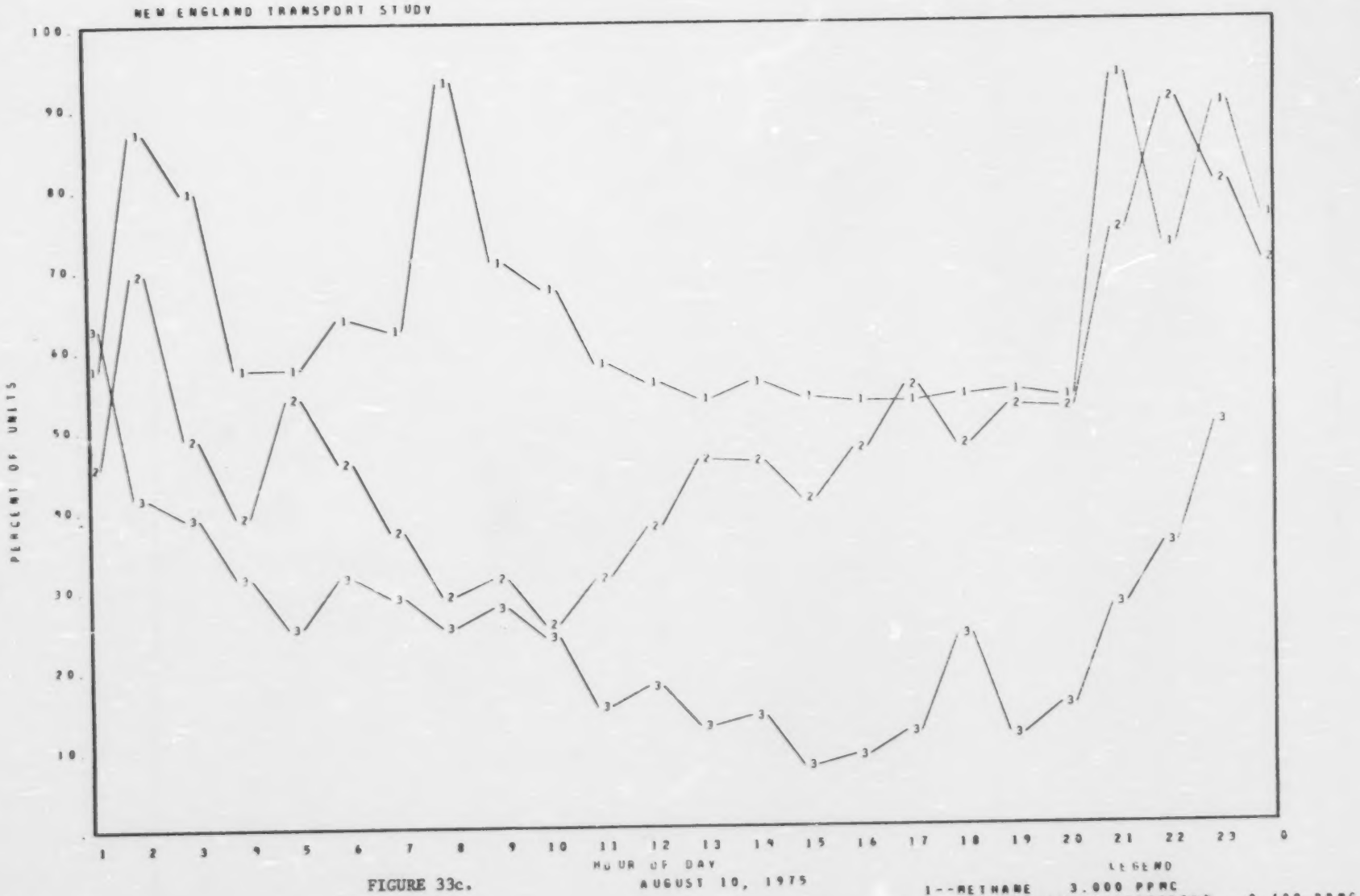

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 10, 1975
LEGEND
1--METHANE 3.000 PPMC
2- NON-METHANE HYDROCARBON 0.600 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 33c.

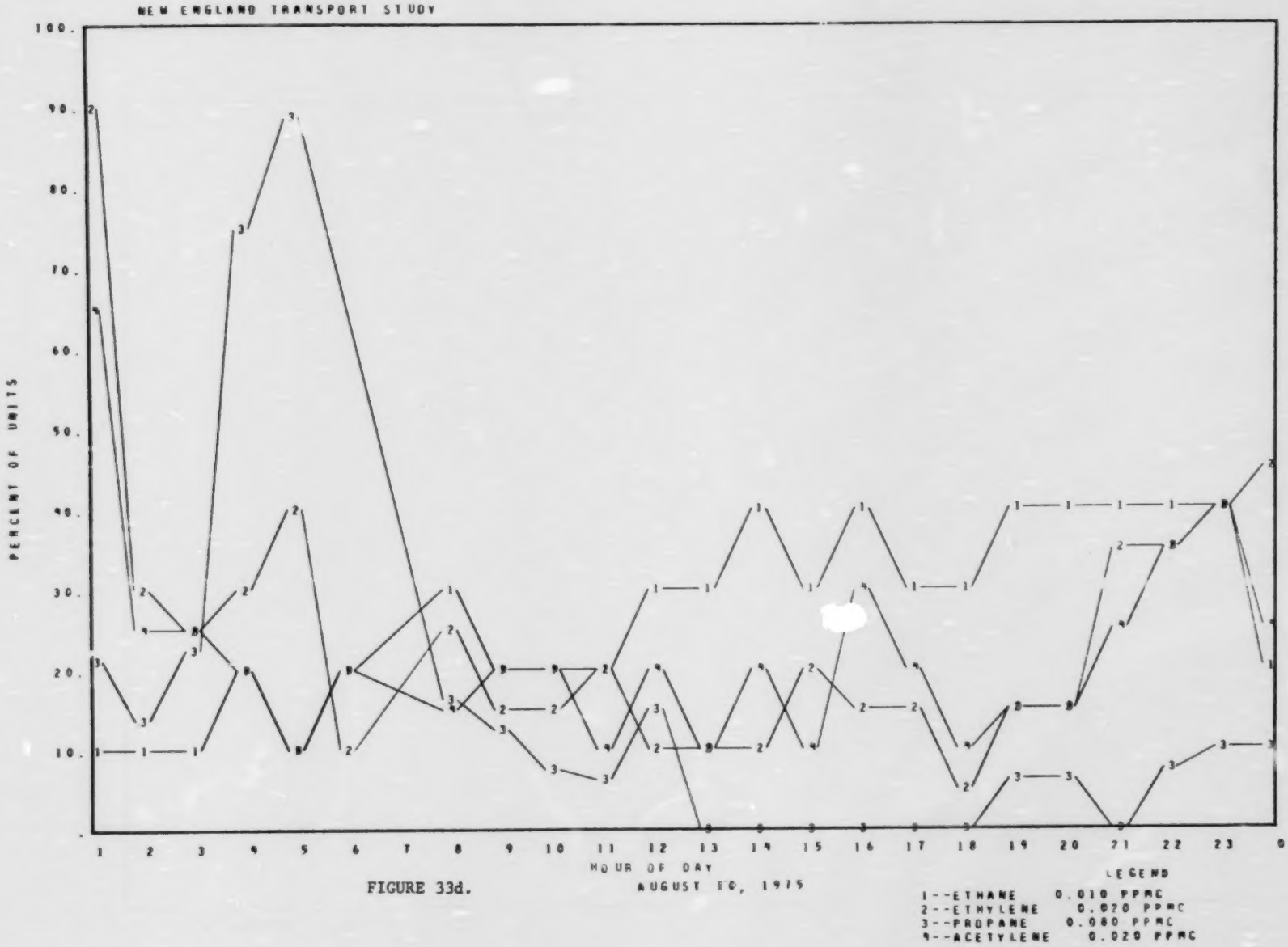

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.080 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 33d.

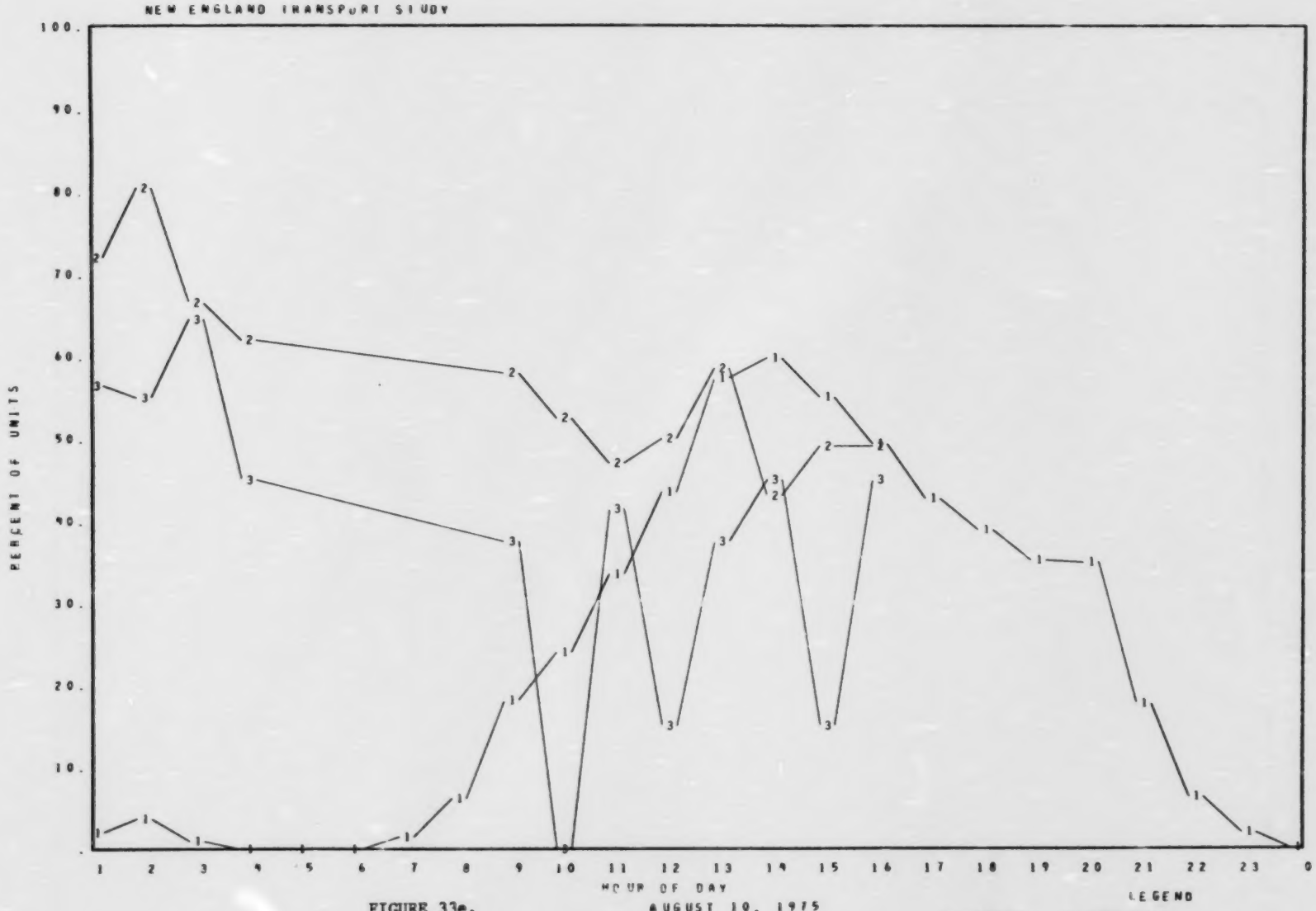
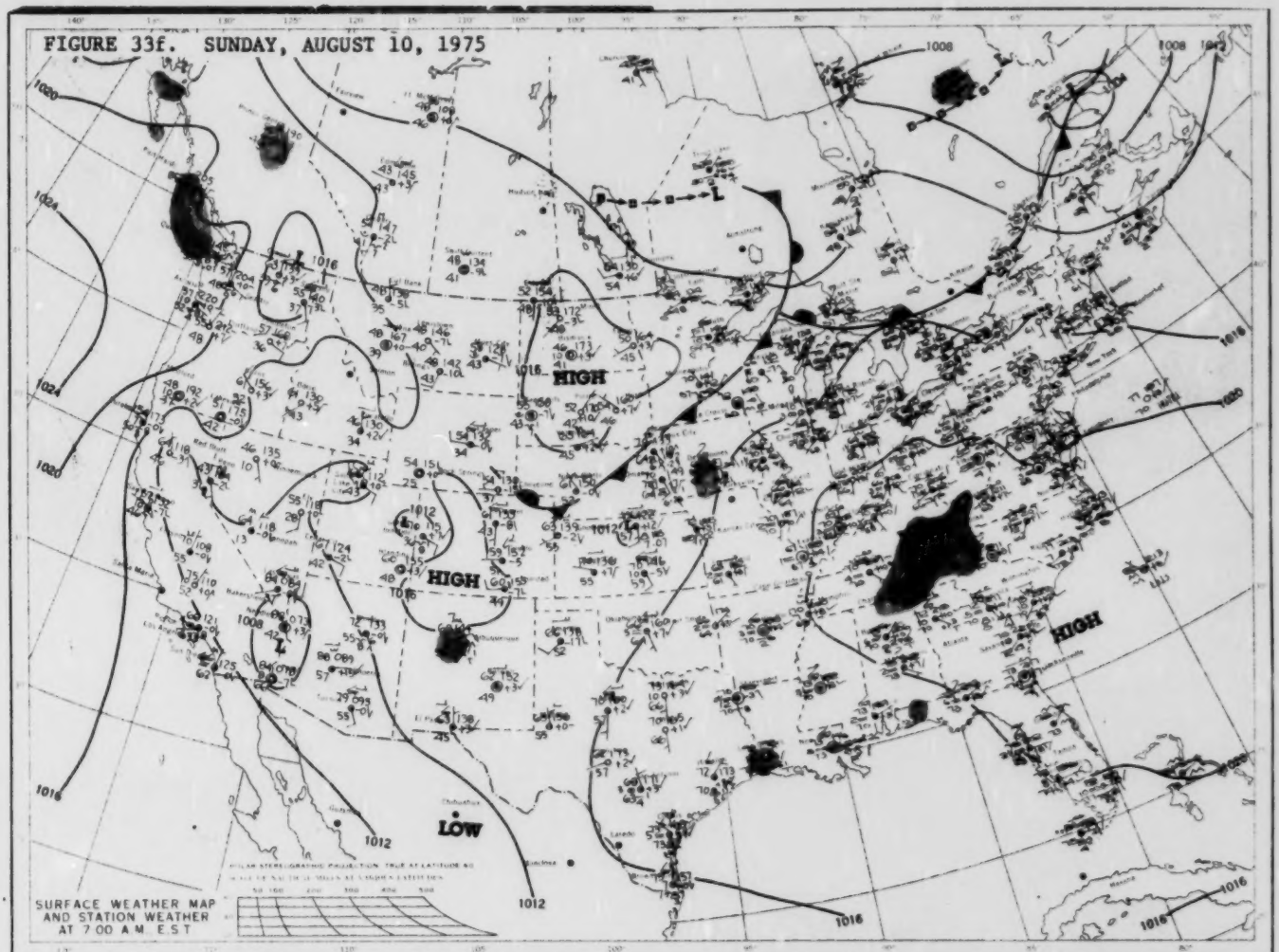

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 10, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 33e.

FIGURE 33f. SUNDAY, AUGUST 10, 1975



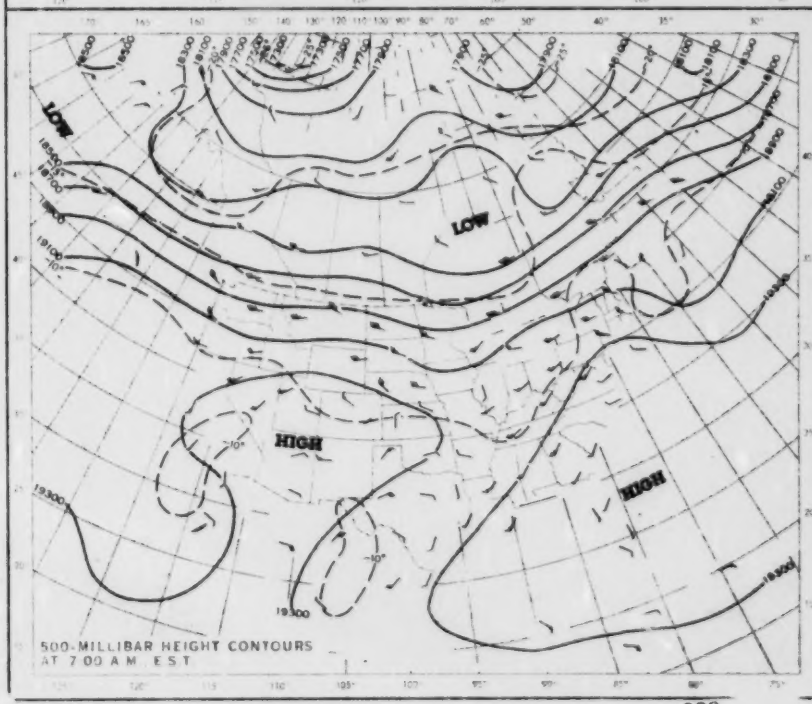


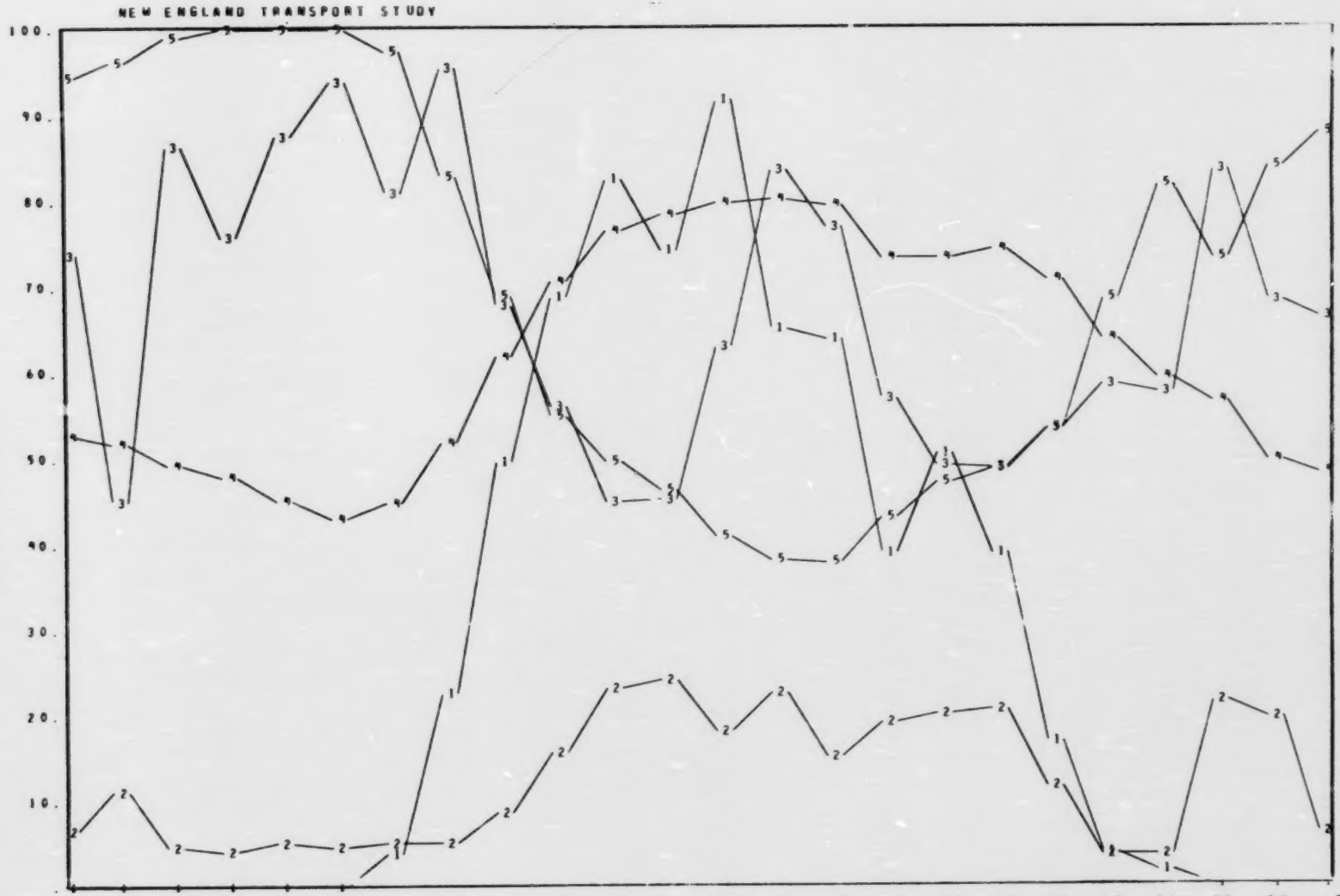
TABLE 30a. AUGUST 11, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.679	24
2--WIND SPEED (MPH)	2.475	24
3--WIND DIRECTION (DEGREES)	242.467	24
4--TEMPERATURE (CENTIGRADE)	24.654	24
5--RELATIVE HUMIDITY (PERCENT)	70.447	24
6--OZONE (PPM)	0.035	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	2.011	24
11--NON-METHANE HYDROCARBON (PPMC)	0.513	24
12--CARBON MONOXIDE (PPM)	0.251	17
13--ETHANE (PPMC)	0.003	24
14--ETHYLENE (PPMC)	0.005	24
15--PROPANE (PPMC)	0.009	24
16--ACETYLENE (PPMC)	0.006	24
19--FLUOROCARBON-11 (PPT)	140.	18
20--CARBON TETRACHLORIDE (PPT)	120.	18

TABLE 30b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 11, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.225	1.350	2.975	4.125	4.950	4.450
2--WIND SPEED (MPH)	1.300	2.200	0.900	0.800	1.000	0.900	1.000	1.000	1.700	3.100	4.600	4.800
3--WIND DIRECTION (DEGREES)	265.	162.	311.	272.	315.	337.	291.	343.	244.	202.	161.	162.
4--TEMPERATURE (CENTIGRADE)	21.	21.	20.	19.	18.	17.	18.	21.	25.	28.	31.	31.
5--RELATIVE HUMIDITY (PERCENT)	94.	96.	99.	100.	100.	100.	97.	83.	69.	55.	49.	46.
6--OZONE (PPM)	.000	0.001	0.001	.000	.000	.000	.000	0.003	0.021	0.045	0.058	0.073
7--NITRIC OXIDE (PPM)	0.005	0.003	0.003	0.002	0.002	0.005	0.011	0.006	0.003	.000	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.009	0.009	0.006	0.004	0.003	0.002	.000	0.005	0.007	0.005	0.005	0.005
9--NITROGEN OXIDES (PPM)	0.013	0.012	0.008	0.006	0.005	0.007	0.011	0.011	0.009	0.005	0.005	0.006
10--METHANE (PPMC)	2.436	3.208	2.208	2.265	1.876	1.903	1.875	2.268	3.178	1.695	1.621	1.586
11--NON-METHANE HYDROCARBON (PPMC)	0.695	0.567	0.529	0.477	0.378	0.325	0.410	0.633	0.405	0.351	0.329	0.645
12--CARBON MONOXIDE (PPM)	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	0.600	0.350	0.200	0.162	0.200
13--ETHANE (PPMC)	0.002	0.002	0.002	0.002	0.001	0.001	0.005	0.004	0.004	0.004	0.004	0.004
14--ETHYLENE (PPMC)	0.008	0.009	0.004	0.002	0.002	0.002	0.012	0.009	0.014	0.006	0.005	0.002
15--PROPANE (PPMC)	0.027	0.017	0.012	0.006	0.007	0.015	0.051	0.023	0.020	0.007	.000	.000
16--ACETYLENE (PPMC)	0.004	0.005	0.004	0.002	0.002	0.001	0.008	0.009	0.045	0.007	0.004	0.003
19--FLUOROCARBON-11 (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	165.	188.	162.	127.	135.	126.
20--CARBON TETRACHLORIDE (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	120.	90.	105.	135.	140.	180.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.500	3.900	3.825	2.325	3.025	2.325	1.000	0.225	0.100	.000	.000	.000
2--WIND SPEED (MPH)	3.600	4.500	3.000	3.800	4.000	4.100	2.300	0.700	0.700	4.300	3.900	1.200
3--WIND DIRECTION (DEGREES)	227.	301.	277.	204.	176.	176.	192.	210.	207.	301.	245.	238.
4--TEMPERATURE (CENTIGRADE)	32.	32.	32.	29.	29.	30.	28.	25.	24.	23.	20.	19.
5--RELATIVE HUMIDITY (PERCENT)	41.	38.	38.	43.	47.	49.	53.	68.	82.	73.	84.	88.
6--OZONE (PPM)	0.078	0.075	0.072	0.060	0.052	0.053	0.058	0.016	0.008	0.053	0.057	0.038
7--NITRIC OXIDE (PPM)	0.001	0.003	0.002	0.002	0.002	0.001	0.002	0.004	0.005	0.002	.000	0.001
8--NITROGEN DIOXIDE (PPM)	0.004	0.004	0.006	0.006	0.007	0.005	0.007	0.017	0.016	0.006	0.002	0.003
9--NITROGEN OXIDES (PPM)	0.005	0.007	0.008	0.007	0.009	0.006	0.009	0.021	0.021	0.007	0.002	0.004
10--METHANE (PPMC)	1.568	1.533	1.570	1.619	1.648	1.496	1.723	2.675	3.553	1.713	1.530	1.516
11--NON-METHANE HYDROCARBON (PPMC)	0.455	0.358	0.345	0.828	0.780	0.462	0.578	0.655	0.962	0.397	0.334	0.413
12--CARBON MONOXIDE (PPM)	0.200	0.137	0.250	0.087	0.162	0.175	0.212	0.512	0.612	0.237	0.075	0.087
13--ETHANE (PPMC)	0.003	0.003	0.004	0.002	0.003	0.004	0.004	0.003	0.004	0.001	0.001	0.001
14--ETHYLENE (PPMC)	0.001	0.003	0.010	0.004	0.003	0.003	0.004	0.007	0.011	0.007	0.002	0.002
15--PROPANE (PPMC)	.000	.000	0.007	.000	0.009	.000	.000	.000	0.014	.000	.000	.000
16--ACETYLENE (PPMC)	0.001	0.003	0.006	0.004	0.003	0.004	0.004	0.008	0.008	0.002	.000	.000
19--FLUOROCARBON-11 (PPT)	121.	106.	111.	132.	192.	130.	141.	140.	250.	97.	96.	108.
20--CARBON TETRACHLORIDE (PPT)	128.	120.	113.	120.	105.	120.	120.	135.	125.	113.	90.	105.


NEW ENGLAND TRANSPORT STUDY
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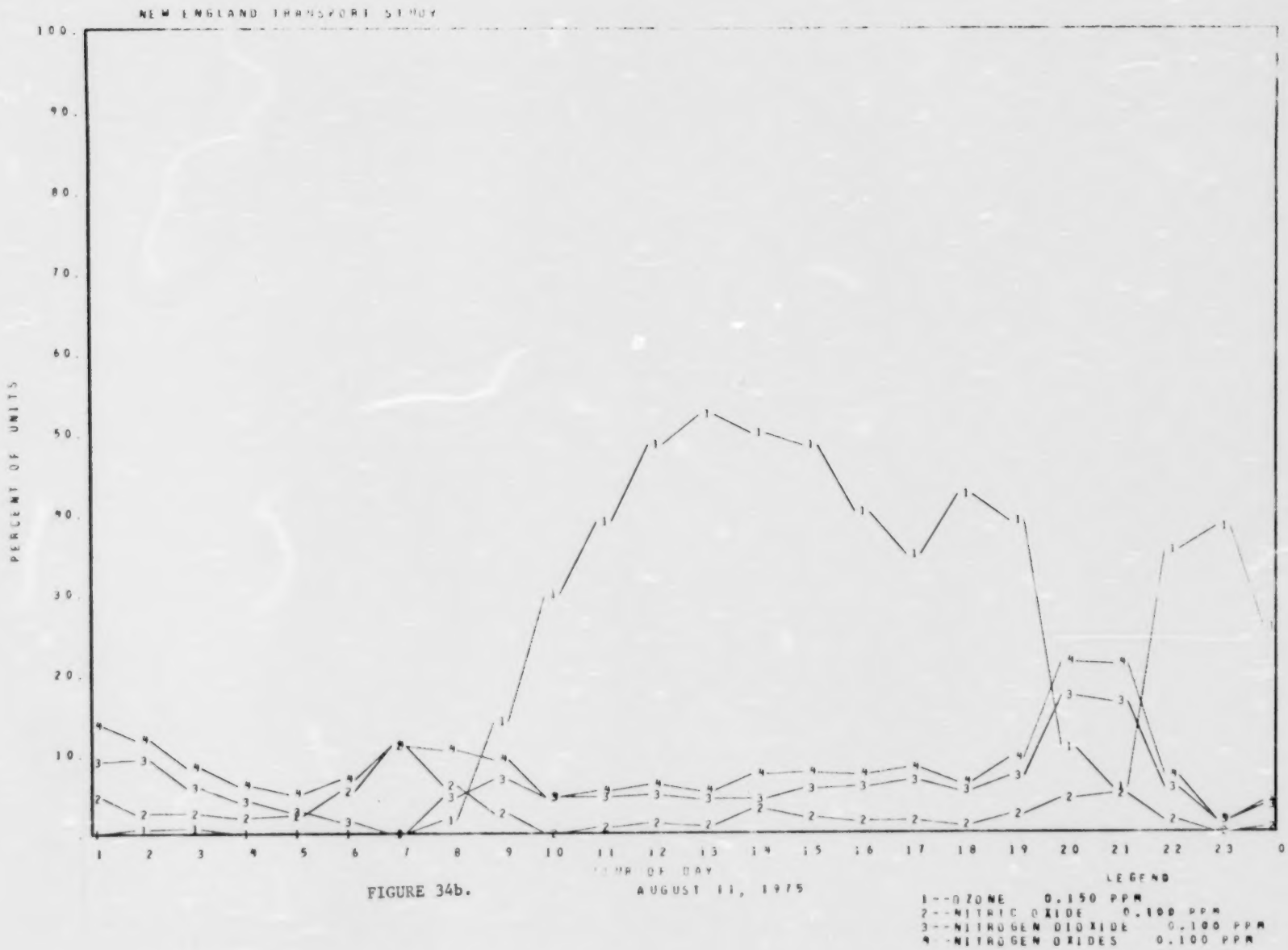
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 11, 1975
LEGEND
1--GLOBAL IRRADIANCE 6.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 90.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 34a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 11, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 34b.

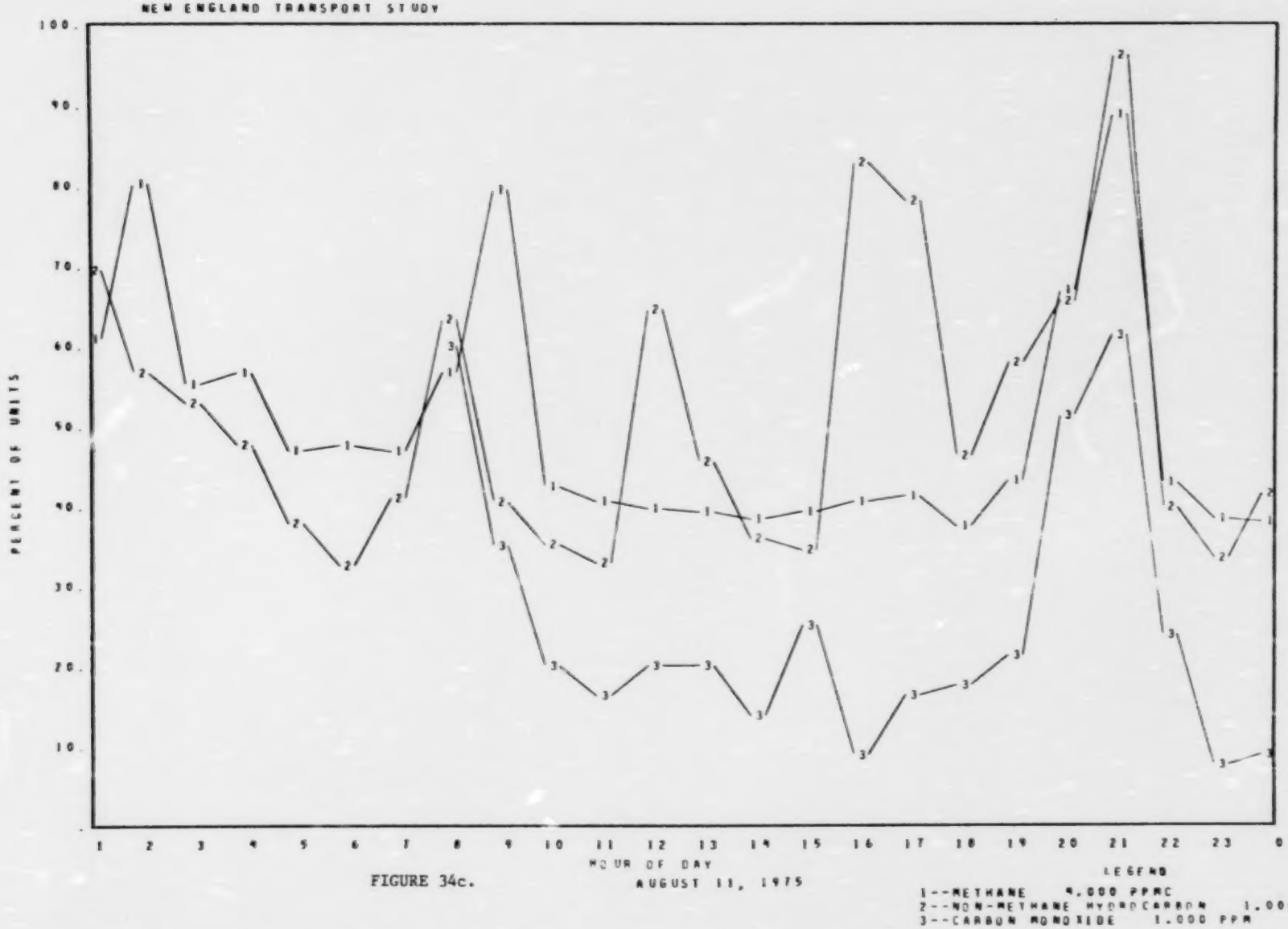

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 11, 1975
LEGEND
1--METHANE 4.000 PPMC
2--NON-METHANE HYDROCARBON 1.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 34c.

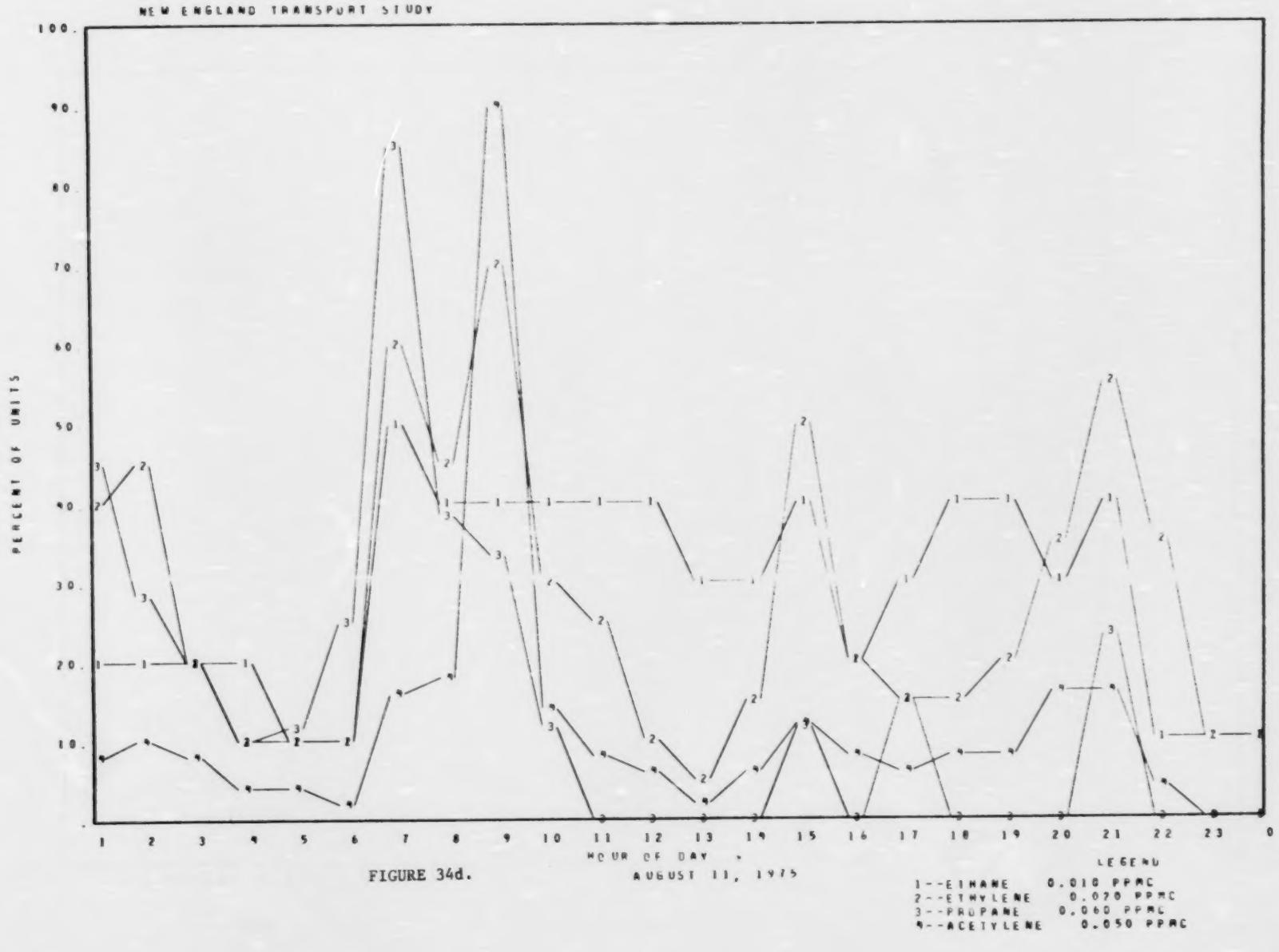

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 11, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.060 PPMC
4--ACETYLENE 0.050 PPMC

FIGURE 34d.

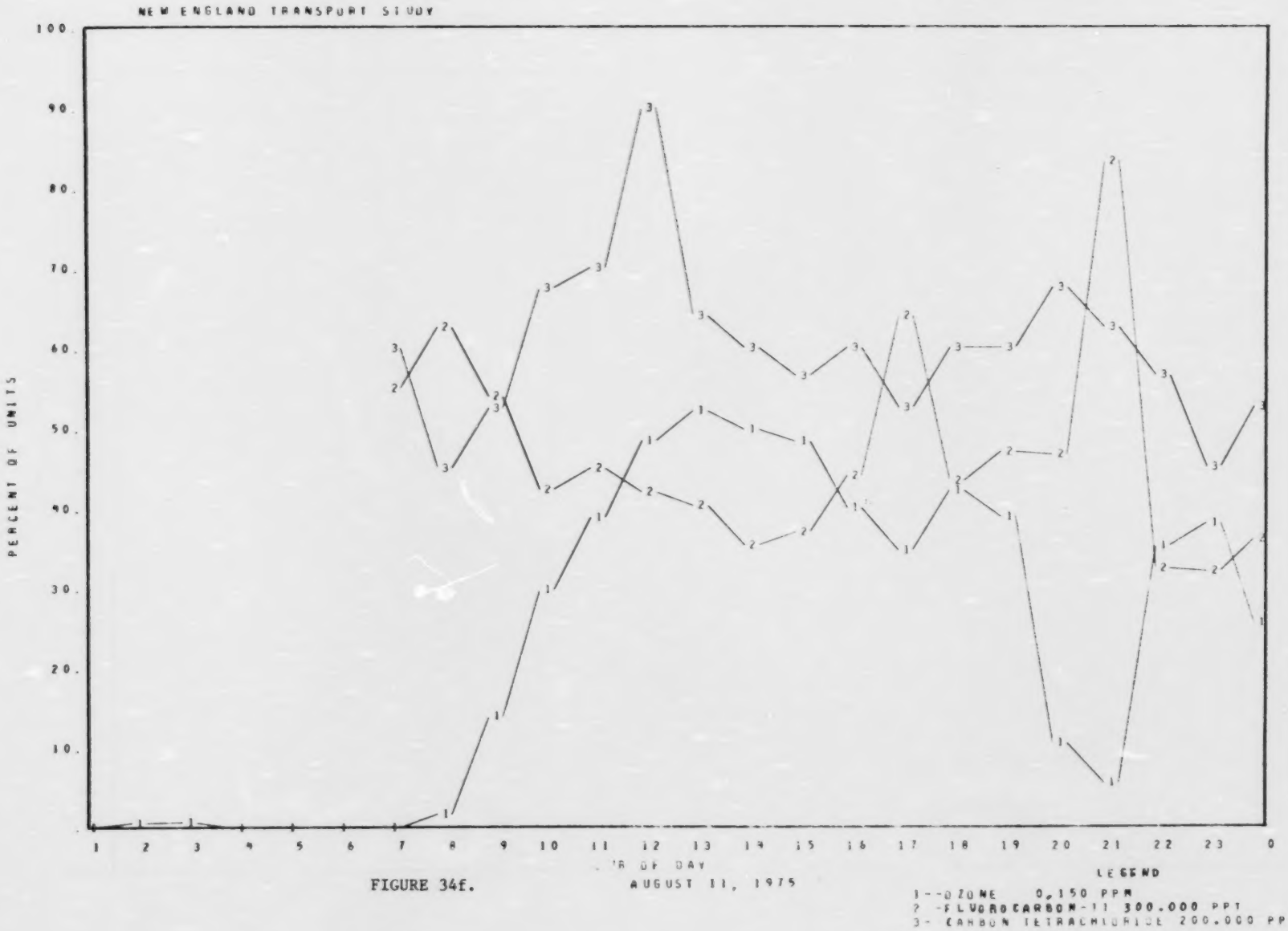
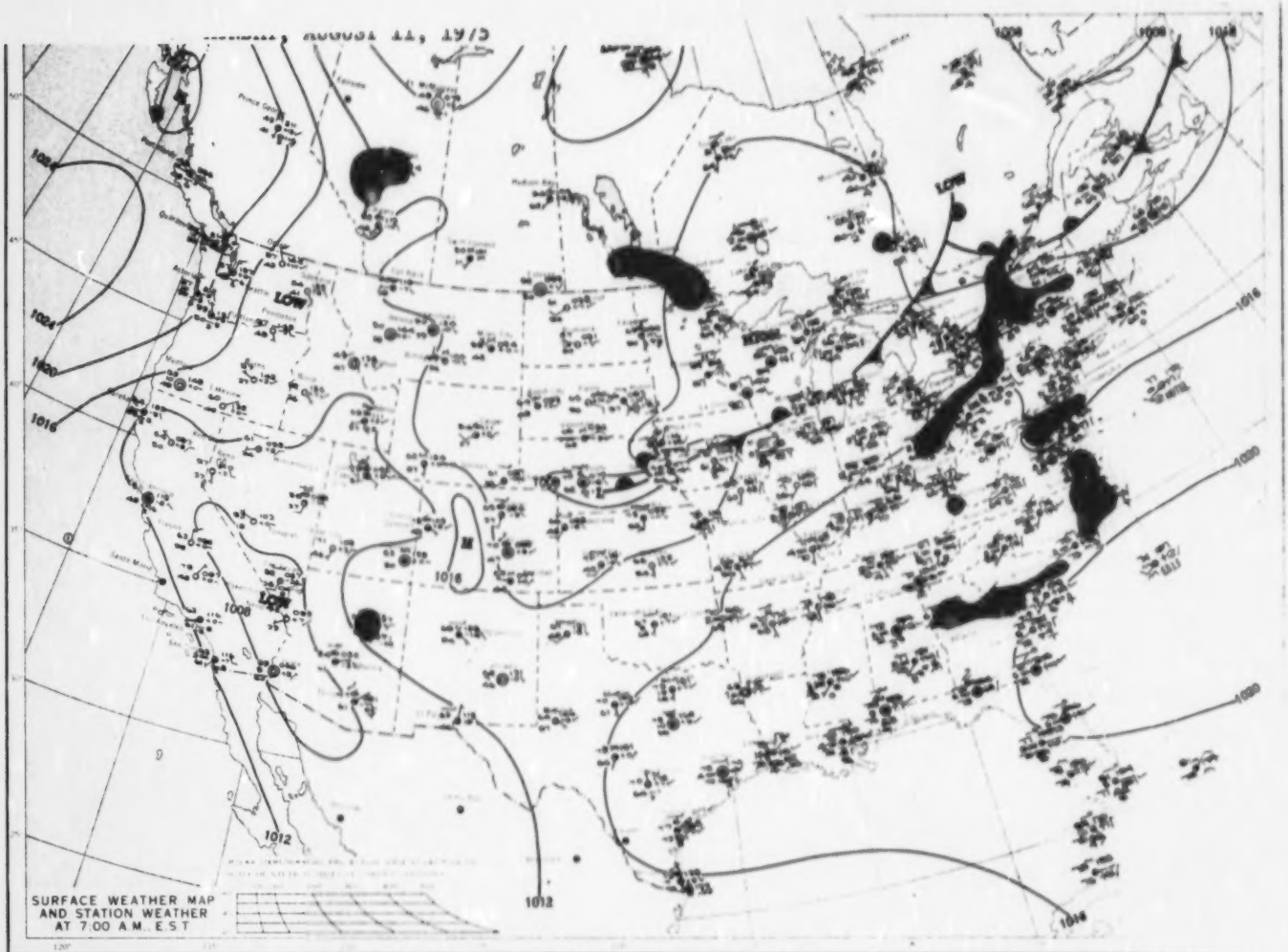
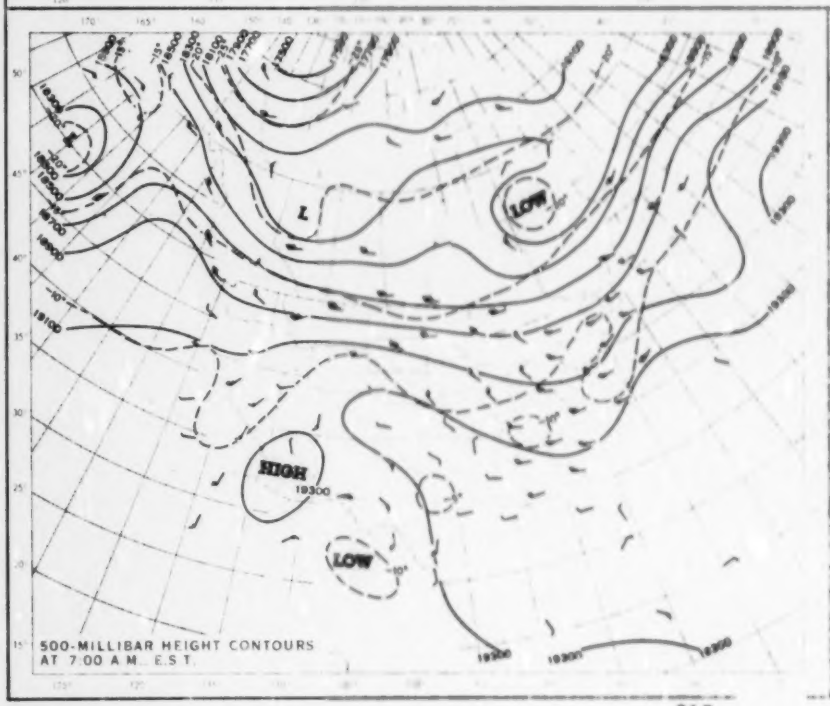

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
R OF DAY
AUGUST 11, 1975
LEGEND
1--OZONE 0.150 PPM
2 -FLUOROCARBON-11 300.000 PPT
3- CARBON TETRACHLORIDE 200.000 PPT

FIGURE 34f.



SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M. E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M. E.S.T.

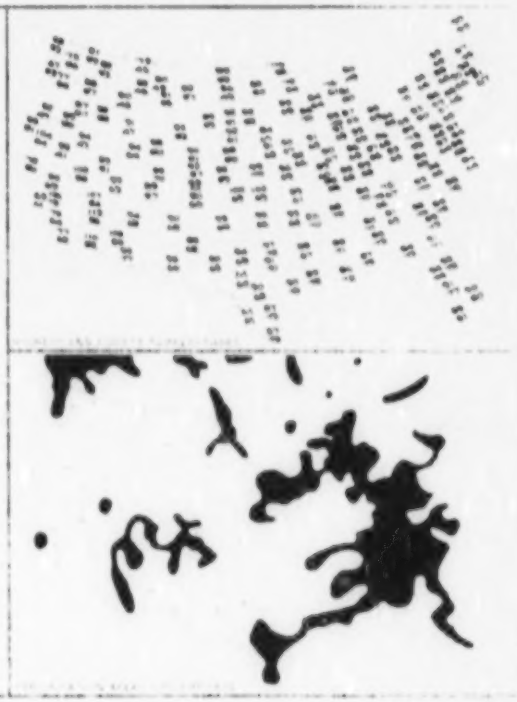


TABLE 31a. AUGUST 12, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.228	24
2--WIND SPEED (MPH)	2.342	24
3--WIND DIRECTION (DEGREES)	260.745	24
4--TEMPERATURE (CENTIGRADE)	24.439	24
5--RELATIVE HUMIDITY (PERCENT)	86.578	24
6--OZONE (PPM)	0.039	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.007	24
10--METHANE (PPMC)	1.775	24
11--NON-METHANE HYDROCARBON (PPMC)	0.464	24
12--CARBON MONOXIDE (PPM)	0.181	24
13--ETHANE (PPMC)	0.002	18
14--ETHYLENE (PPMC)	0.003	18
15--PROPANE (PPMC)	0.004	21
16--ACETYLENE (PPMC)	0.003	18
19--FLUOROCARBON-11 (PPT)	121.	22
20--CARBON TETRACHLORIDE (PPT)	86.	21

TABLE 31b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 12, 1975											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.225	1.475	3.100	4.450	5.500	6.450
2--WIND SPEED (MPH)	0.600	0.700	1.000	0.900	0.900	1.500	1.000	1.700	2.300	4.400	3.500	2.600
3--WIND DIRECTION (DEGREES)	318.	224.	192.	191.	185.	217.	315.	199.	344.	12.	356.	327.
4--TEMPERATURE (CENTIGRADE)	18.	18.	18.	18.	17.	17.	18.	20.	24.	26.	29.	31.
5--RELATIVE HUMIDITY (PERCENT)	92.	93.	93.	93.	94.	95.	92.	83.	68.	56.	49.	44.
6--OZONE (PPM)	0.027	0.019	0.017	0.020	0.017	0.013	0.003	0.005	0.019	0.057	0.068	0.074
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	0.000	0.009	0.007	0.006	0.001	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.001	0.001	0.001	0.001	.000	0.001	0.000	0.004	0.007	0.003	0.001	0.001
9--NITROGEN OXIDES (PPM)	0.001	0.001	0.001	0.001	.000	0.001	0.009	0.011	0.013	0.004	0.003	0.002
10--METHANE (PPMC)	1.451	2.273	2.098	1.915	2.728	2.543	1.508	2.010	2.018	1.463	1.433	1.441
11--NON-METHANE HYDROCARBON (PPMC)	0.395	0.570	0.475	0.426	0.565	0.443	0.461	0.475	0.365	0.294	0.312	0.342
12--CARBON MONOXIDE (PPM)	0.050	0.063	0.075	0.100	0.100	0.100	0.300	0.262	0.400	0.150	0.075	0.050
13--ETHANE (PPMC)	0.001	0.001	0.001	-0.001	-0.001	-0.002	0.002	0.002	0.002	0.002	0.002	-0.002
14--ETHYLENE (PPMC)	0.001	0.001	0.001	-0.001	-0.002	-0.002	0.003	0.003	0.002	0.001	0.001	-0.000
15--PROPANE (PPMC)	.000	.000	.000	.000	.000	.000	.000	.000	0.011	0.006	0.006	-0.008
16--ACETYLENE (PPMC)	0.001	0.001	.000	-0.001	-0.001	-0.002	0.003	0.003	0.003	0.001	0.001	-0.001
19--FLUOROCARBON-11 (PPT)	111.	127.	113.	123.	121.	124.	111.	167.	136.	106.	108.	103.
20--CARBON TETRACHLORIDE (PPT)	105.	75.	83.	83.	68.	120.	110.	68.	90.	75.	98.	75.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.925	5.875	6.400	5.450	4.025	2.950	1.225	0.325	0.100	.000	.000	.000
2--WIND SPEED (MPH)	3.500	3.900	5.800	6.600	4.400	2.800	2.800	1.200	0.800	1.000	1.400	0.900
3--WIND DIRECTION (DEGREES)	301.	303.	309.	297.	308.	289.	305.	283.	278.	211.	245.	248.
4--TEMPERATURE (CENTIGRADE)	32.	32.	33.	33.	33.	32.	29.	26.	22.	21.	20.	20.
5--RELATIVE HUMIDITY (PERCENT)	39.	37.	35.	33.	33.	34.	40.	53.	73.	88.	89.	91.
6--OZONE (PPM)	0.073	0.074	0.074	0.072	0.072	0.070	0.064	0.049	0.025	0.011	0.005	0.001
7--NITRIC OXIDE (PPM)	0.004	0.004	0.003	0.004	0.006	0.004	0.006	0.006	0.004	0.007	0.004	0.006
8--NITROGEN DIOXIDE (PPM)	0.002	0.001	0.003	0.004	0.006	0.005	0.002	0.006	0.007	0.009	0.010	0.013
9--NITROGEN OXIDES (PPM)	0.006	0.005	0.006	0.008	0.012	0.010	0.007	0.012	0.012	0.016	0.014	0.019
10--METHANE (PPMC)	1.411	1.423	1.394	1.386	1.403	1.390	1.393	1.421	1.571	2.766	2.543	1.626
11--NON-METHANE HYDROCARBON (PPMC)	0.593	0.430	0.424	0.468	0.593	0.456	0.417	0.400	0.602	0.615	0.547	0.470
12--CARBON MONOXIDE (PPM)	0.087	0.100	0.087	0.175	0.312	0.200	0.137	0.188	0.200	0.300	0.337	0.500
13--ETHANE (PPMC)	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002	-0.003	-0.003	0.004	0.003
14--ETHYLENE (PPMC)	.000	0.001	.000	0.007	0.003	0.011	0.003	0.005	-0.006	-0.006	0.007	0.010
15--PROPANE (PPMC)	0.010	0.003	0.005	0.004	0.004	0.007	.000	0.014	-0.013	-0.011	0.010	0.005
16--ACETYLENE (PPMC)	0.002	0.002	0.001	0.006	0.002	0.014	0.001	0.003	-0.005	-0.006	0.008	0.009
19--FLUOROCARBON-11 (PPT)	104.	105.	106.	104.	107.	106.	138.	107.	-128.	-150.	171.	158.
20--CARBON TETRACHLORIDE (PPT)	98.	83.	75.	83.	68.	75.	90.	-90.	-90.	-90.	90.	128.

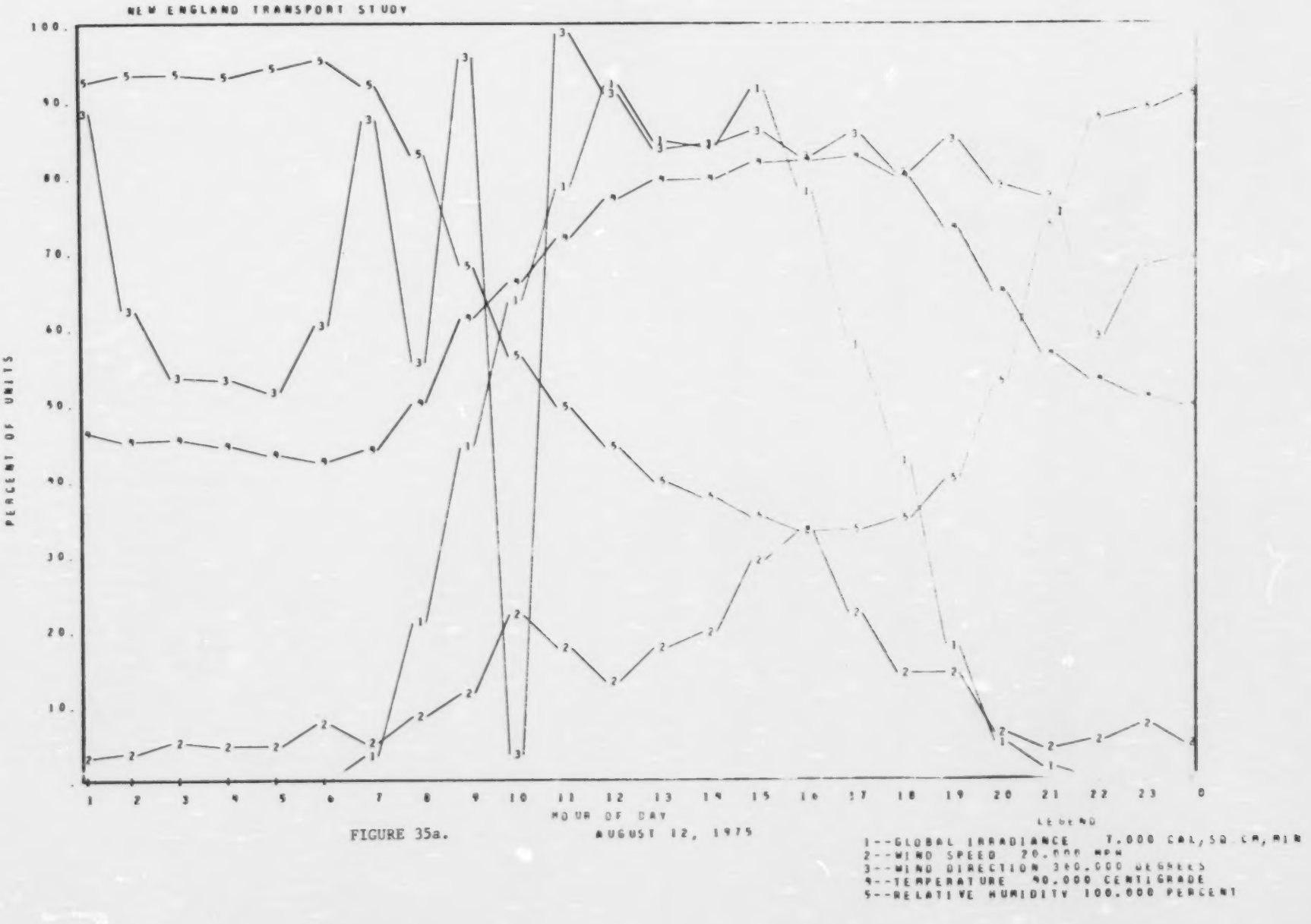

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 12, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 35a.

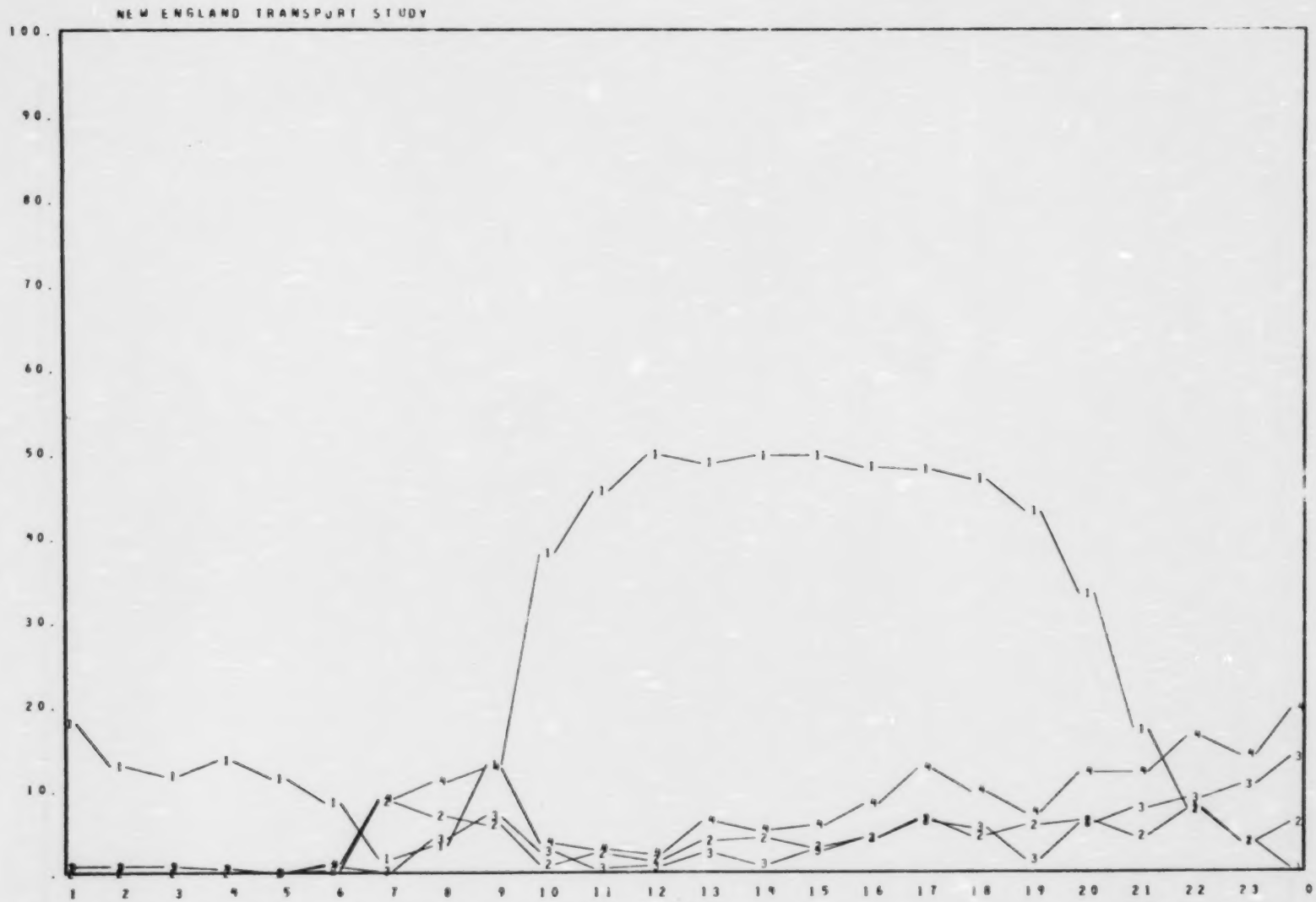

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
OF DAY
AUGUST 12, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 35b.

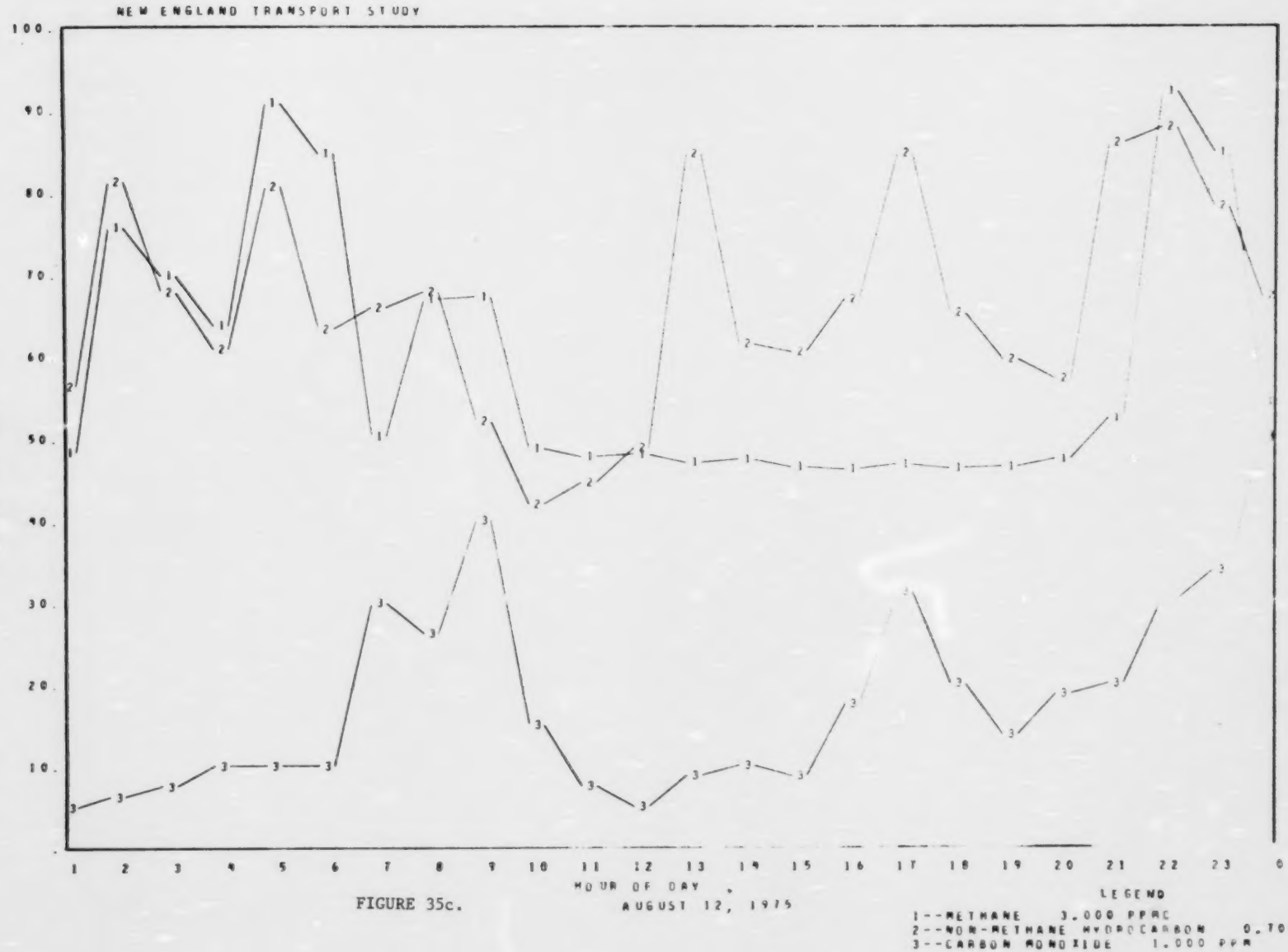

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 12, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 35c.

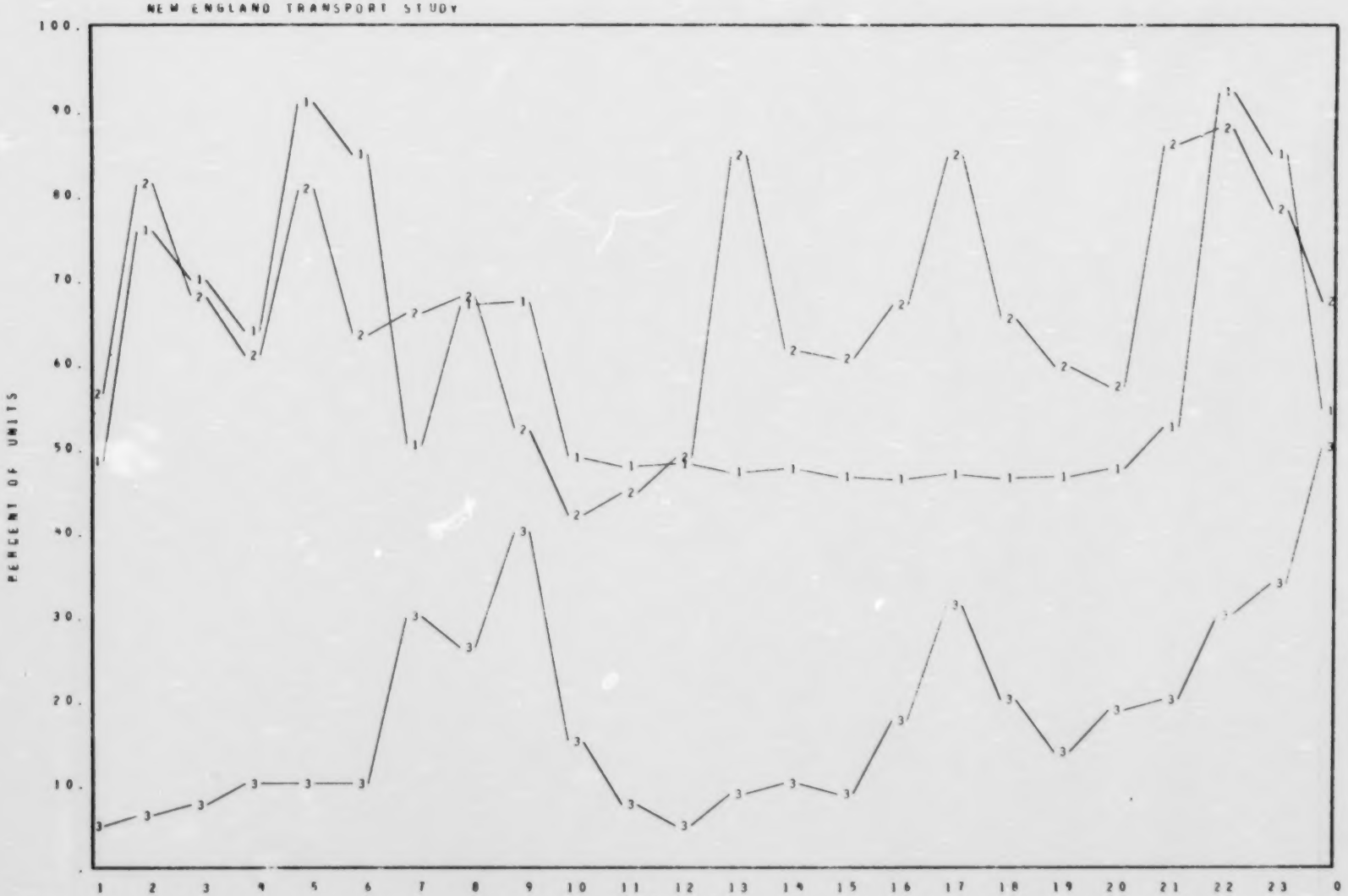

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 12, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 35d.

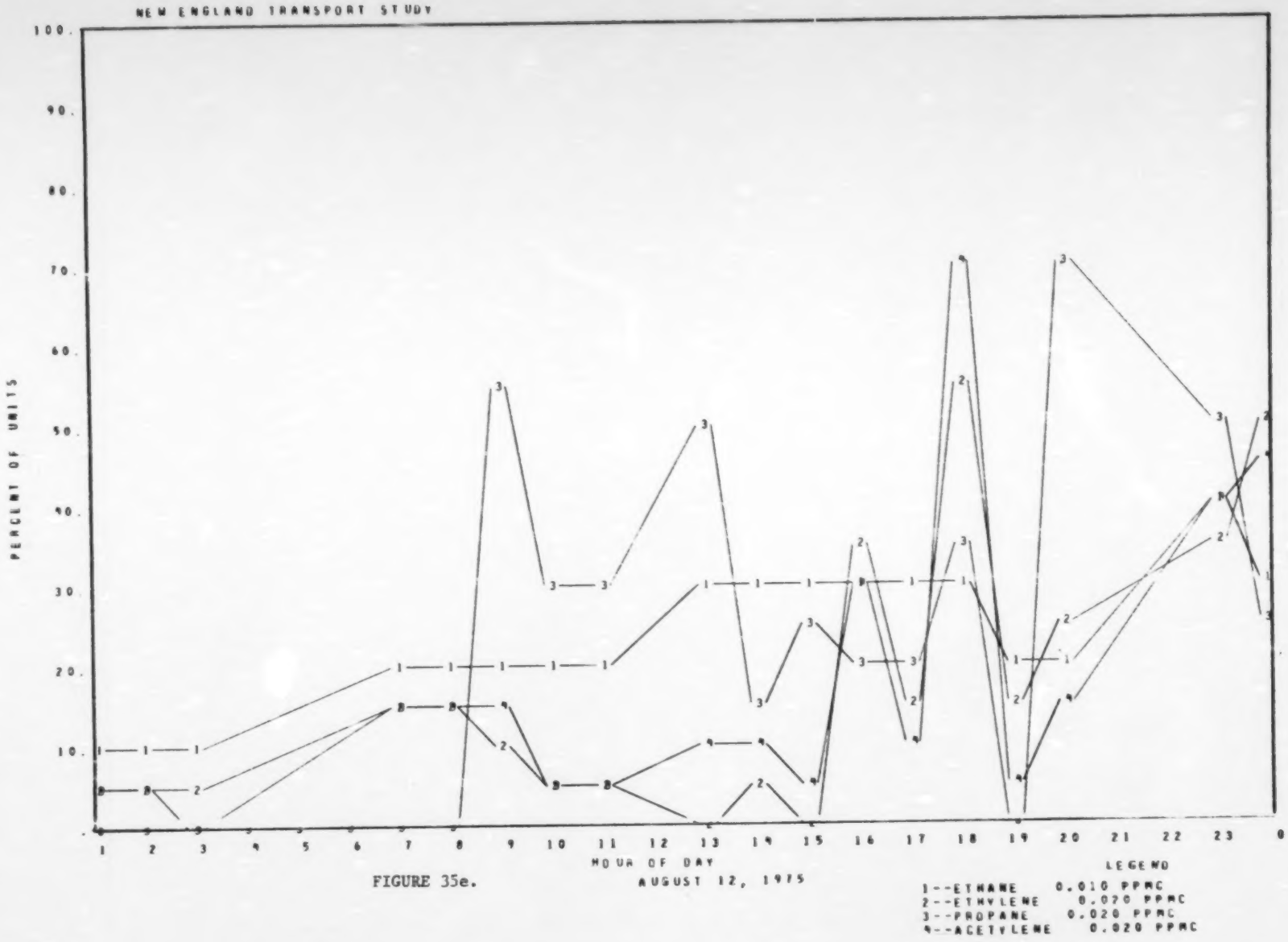

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 12, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.020 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 35e.

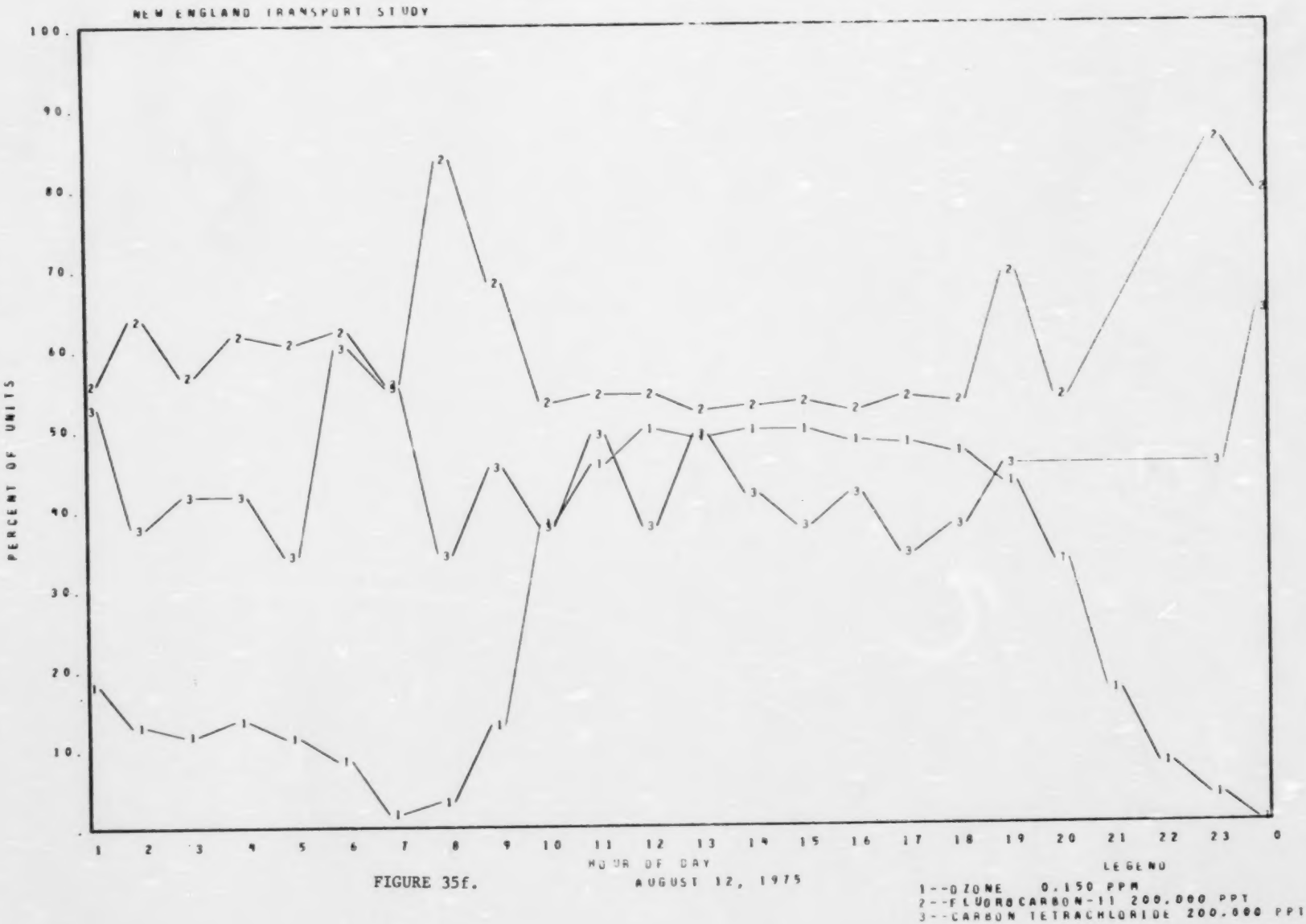
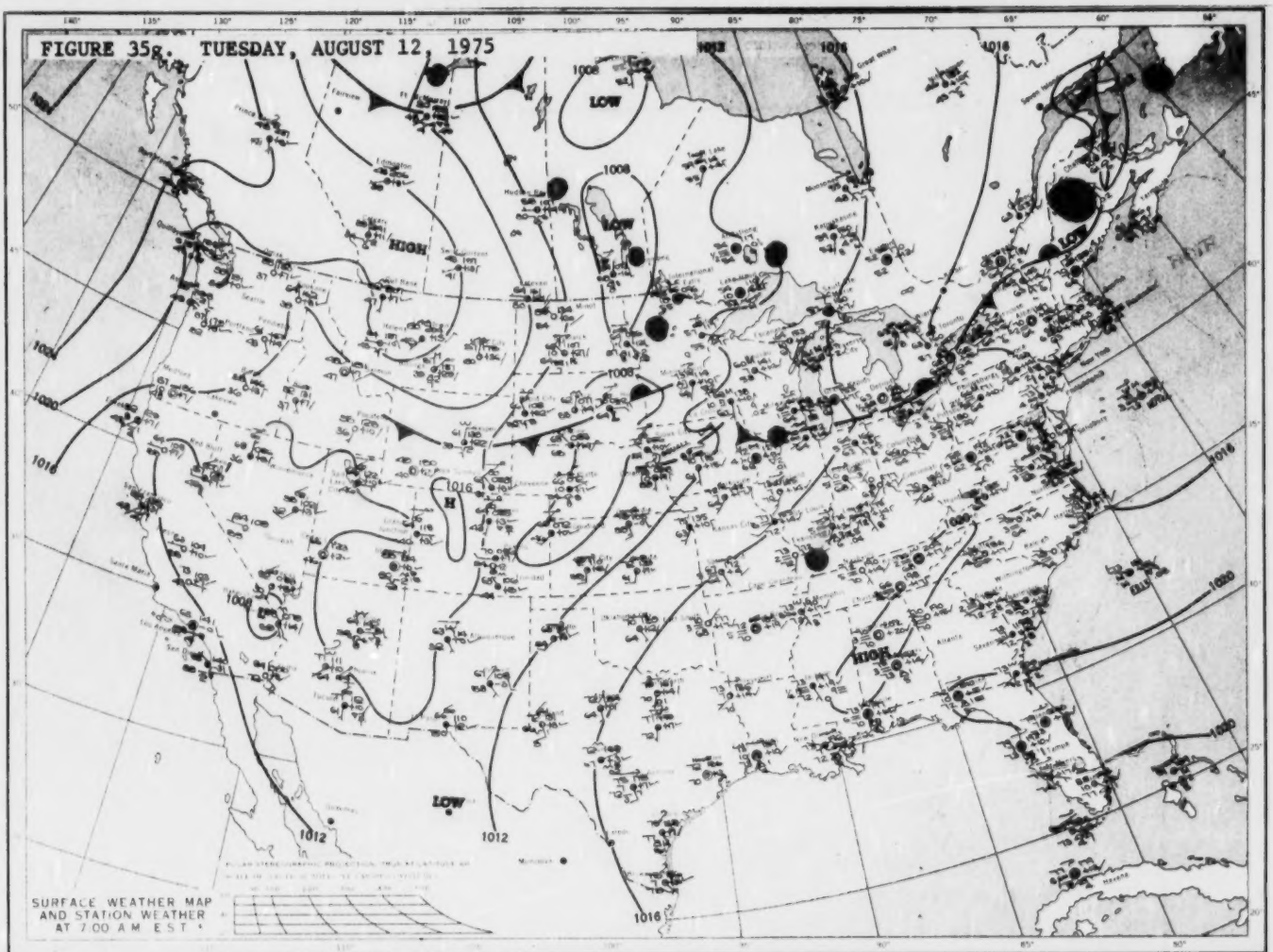

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 12, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 35f.

FIGURE 35a. TUESDAY, AUGUST 12, 1975



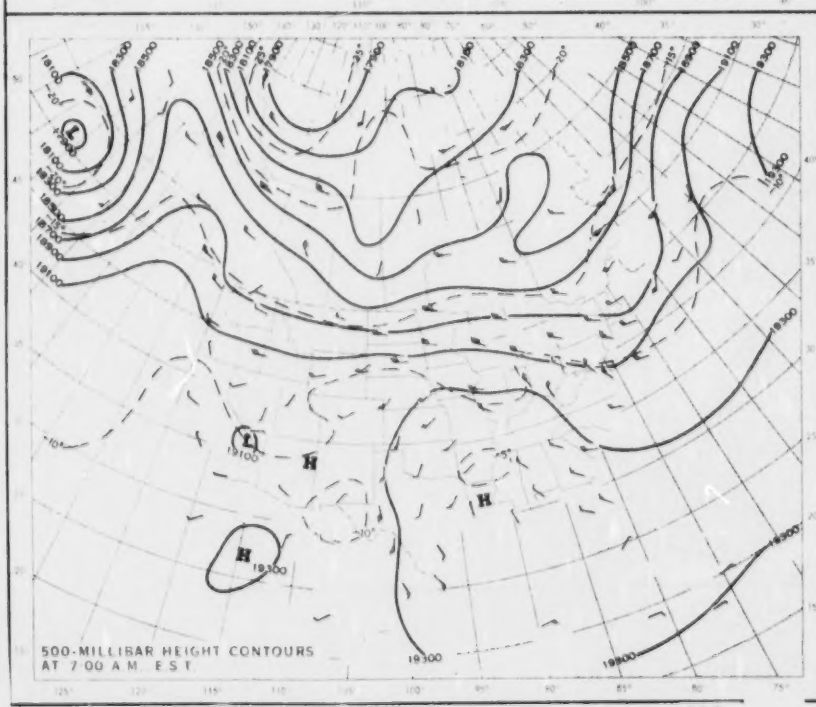


TABLE 32a. AUGUST 13, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.137	24
2--WIND SPEED (MPH)	1.733	24
3--WIND DIRECTION (DEGREES)	235.425	24
4--TEMPERATURE (CENTIGRADE)	24.590	24
5--RELATIVE HUMIDITY (PERCENT)	63.059	24
6--OZONE (PPM)	0.040	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.936	24
11--NON-METHANE HYDROCARBON (PPMC)	0.484	24
12--CARBON MONOXIDE (PPM)	0.297	24
13--ETHANE (PPMC)	0.003	21
14--ETHYLENE (PPMC)	0.004	21
15--PROPANE (PPMC)	0.011	19
16--ACETYLENE (PPMC)	0.004	21
19--FLUOROCARBON-11 (PPT)	155.	24
20--CARBON TETRACHLORIDE (PPT)	106.	24

TABLE 32b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 13, 1973											
	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.225	1.575	3.275	4.625	5.725	6.475
2--WIND SPEED (MPH)	0.700	0.300	0.600	0.400	0.100	0.500	0.700	0.900	0.800	1.700	2.400	3.100
3--WIND DIRECTION (DEGREES)	293.	318.	276.	328.	336.	335.	221.	329.	341.	357.	42.	193.
4--TEMPERATURE (CENTIGRADE)	19.	18.	18.	17.	16.	16.	16.	19.	24.	27.	29.	31.
5--RELATIVE HUMIDITY (PERCENT)	93.	94.	95.	95.	96.	96.	95.	80.	61.	48.	42.	37.
6--OZONE (PPM)	.000	0.000	0.001	0.002	.000	.000	.000	0.001	0.013	0.035	0.052	0.056
7--NITRIC OXIDE (PPM)	0.005	0.003	0.001	0.000	0.001	0.002	0.006	0.008	0.002	0.001	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.009	0.007	0.004	0.003	0.003	0.001	0.002	0.005	0.005	0.003	0.002	0.003
9--NITROGEN OXIDES (PPM)	0.014	0.009	0.004	0.004	0.004	0.003	0.008	0.013	0.006	0.004	0.003	0.004
10--METHANE (PPMC)	1.668	2.359	1.585	3.048	1.900	1.571	4.511	2.466	1.843	1.596	1.511	1.519
11--NON-METHANE HYDROCARBON (PPMC)	0.555	0.547	0.533	0.556	0.470	0.399	0.893	0.505	0.368	0.310	0.267	0.407
12--CARBON MONOXIDE (PPM)	0.325	0.337	0.183	0.187	0.175	0.200	0.287	0.525	0.313	0.187	0.217	0.087
13--ETHANE (PPMC)	0.003	0.003	0.003	0.002	0.003	0.004	0.003	-0.003	0.003	0.002	0.002	0.003
14--ETHYLENE (PPMC)	0.009	0.005	0.004	0.003	0.003	0.003	0.003	-0.003	0.003	0.002	0.001	0.001
15--PROPANE (PPMC)	0.028	0.012	0.011	0.021	0.025	0.054	-0.040	-0.027	0.013	0.006	.000	0.001
16--ACETYLENE (PPMC)	0.007	0.005	0.002	0.003	0.001	0.002	0.003	-0.004	0.006	0.003	0.003	0.003
19--FLUOROCARBON-11 (PPT)	156.	198.	189.	219.	153.	142.	216.	168.	136.	112.	105.	119.
20--CARBON TETRACHLORIDE (PPT)	113.	120.	128.	135.	83.	115.	113.	98.	90.	65.	75.	90.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.075	6.850	5.350	3.750	3.300	2.075	0.650	0.200	0.100	0.025	.000	.000
2--WIND SPEED (MPH)	4.600	4.400	4.500	4.300	2.800	2.200	2.500	0.700	0.500	0.500	1.100	1.300
3--WIND DIRECTION (DEGREES)	170.	185.	197.	210.	213.	214.	196.	200.	166.	179.	188.	165.
4--TEMPERATURE (CENTIGRADE)	32.	32.	32.	31.	31.	30.	28.	26.	25.	24.	24.	24.
5--RELATIVE HUMIDITY (PERCENT)	34.	33.	32.	36.	39.	42.	47.	55.	61.	66.	67.	69.
6--OZONE (PPM)	0.057	0.074	0.083	0.082	0.058	0.061	0.067	0.054	0.061	0.049	0.084	0.076
7--NITRIC OXIDE (PPM)	0.002	0.001	0.001	0.003	0.004	0.004	0.002	0.002	0.002	0.002	0.002	0.002
8--NITROGEN DIOXIDE (PPM)	0.002	0.002	0.003	0.006	0.006	0.006	0.005	0.007	0.010	0.015	0.014	0.012
9--NITROGEN OXIDES (PPM)	0.004	0.003	0.003	0.009	0.010	0.009	0.007	0.009	0.012	0.017	0.016	0.014
10--METHANE (PPMC)	1.491	1.499	1.523	1.531	1.559	1.500	1.950	1.523	1.613	2.935	2.111	1.750
11--NON-METHANE HYDROCARBON (PPMC)	0.366	0.415	0.428	0.565	0.412	0.483	0.366	0.452	0.483	1.042	0.407	0.398
12--CARBON MONOXIDE (PPM)	0.125	0.075	0.063	0.212	0.200	0.250	0.162	0.233	0.600	0.575	0.762	0.817
13--ETHANE (PPMC)	0.002	0.002	0.002	0.002	-0.002	-0.002	0.002	0.003	0.002	0.002	0.003	0.003
14--ETHYLENE (PPMC)	0.001	0.001	0.001	0.001	-0.002	-0.002	0.003	0.005	0.007	0.008	0.008	0.010
15--PROPANE (PPMC)	0.011	0.011	.000	.000	-0.002	-0.005	-0.007	0.010	.000	0.010	0.003	.000
16--ACETYLENE (PPMC)	0.001	0.002	0.002	0.003	-0.003	-0.003	0.003	0.004	0.005	0.010	0.011	0.010
19--FLUOROCARBON-11 (PPT)	105.	154.	119.	141.	112.	112.	139.	135.	138.	173.	249.	241.
20--CARBON TETRACHLORIDE (PPT)	83.	90.	105.	105.	90.	68.	83.	120.	120.	120.	160.	165.

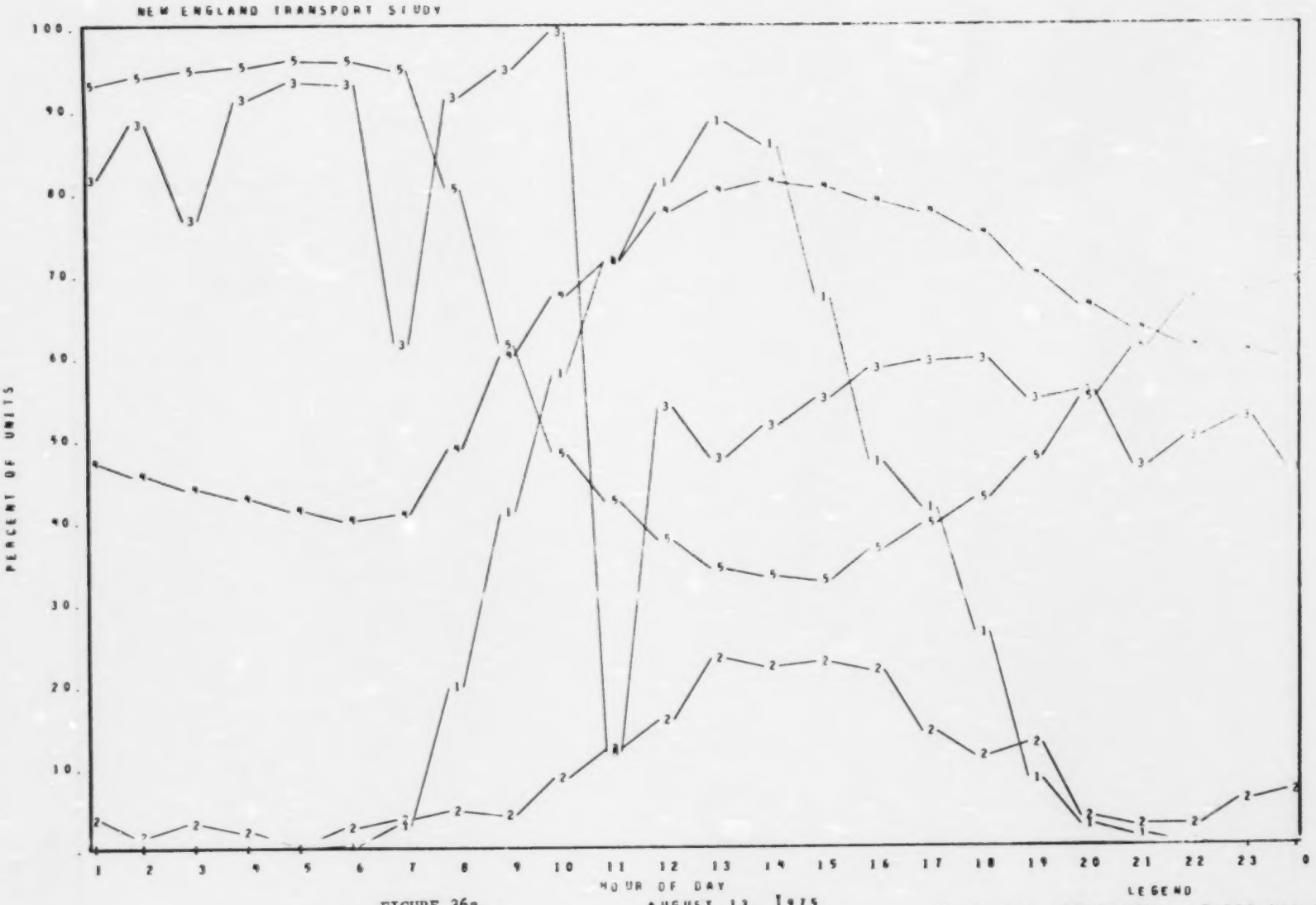

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 13, 1975
LEGEND
1--GLOBAL IRRADIANCE 8.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 36a.

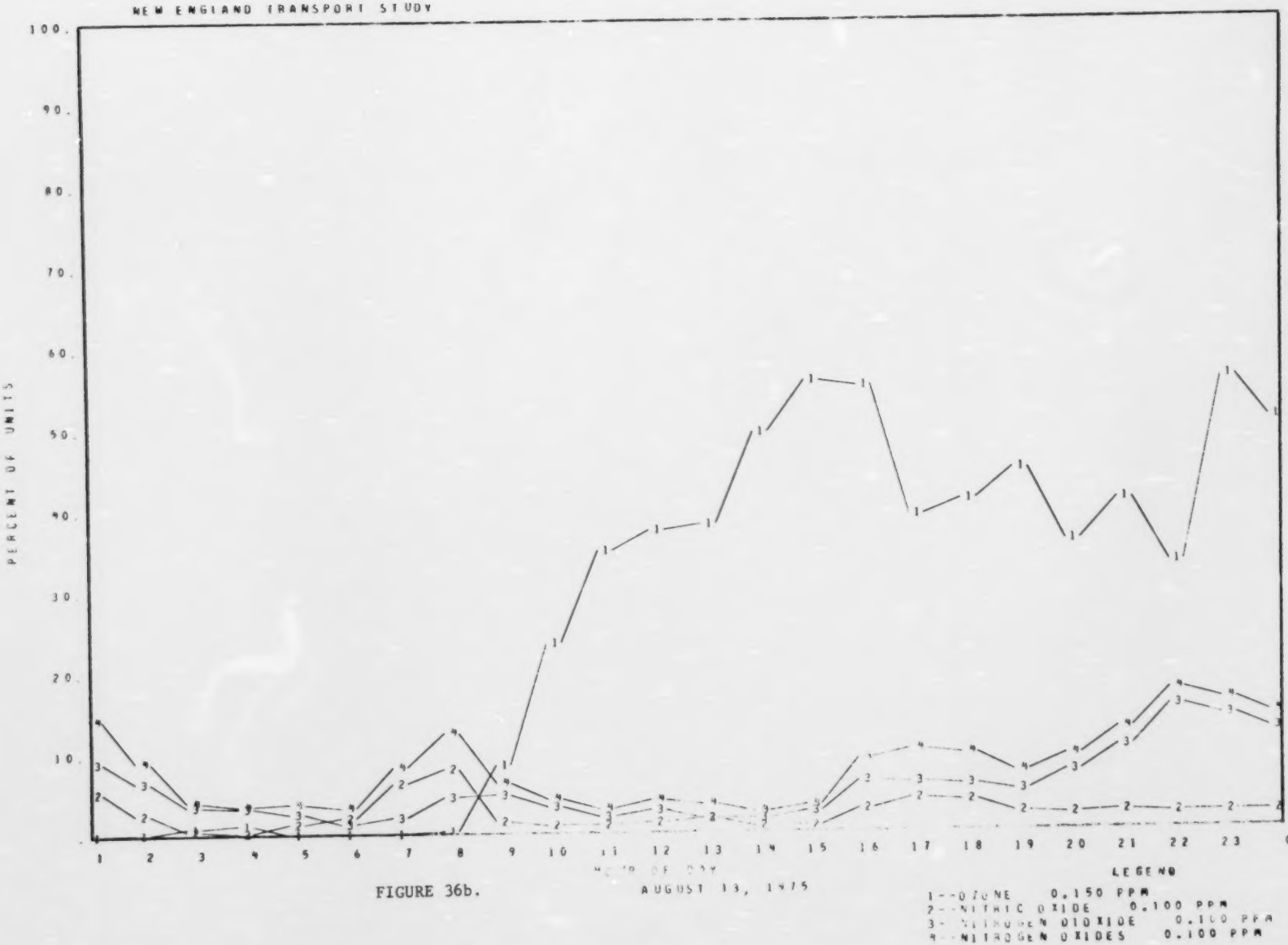

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 13, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 36b.

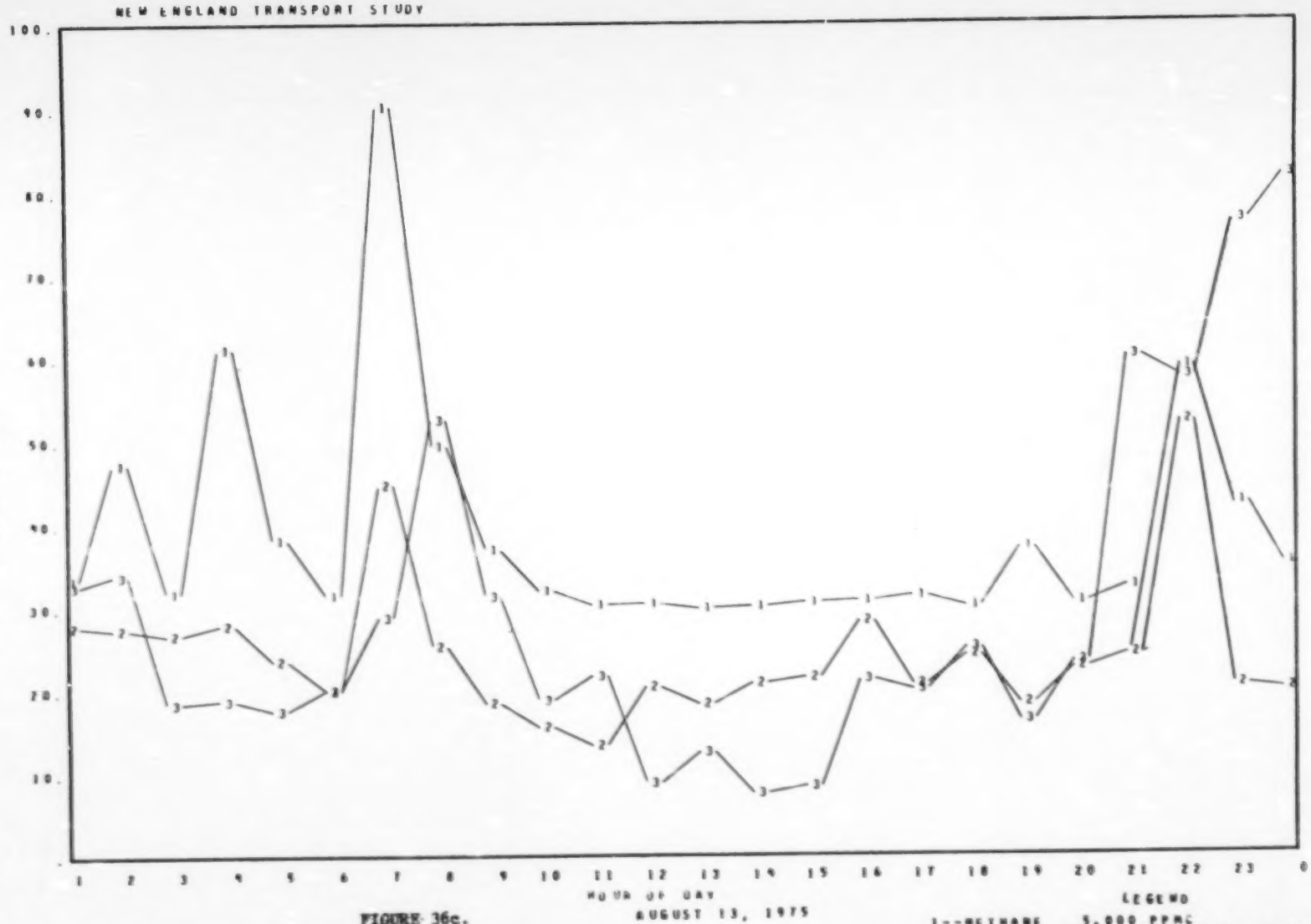

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 13, 1975
LEGEND
1--METHANE 5.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 36c.

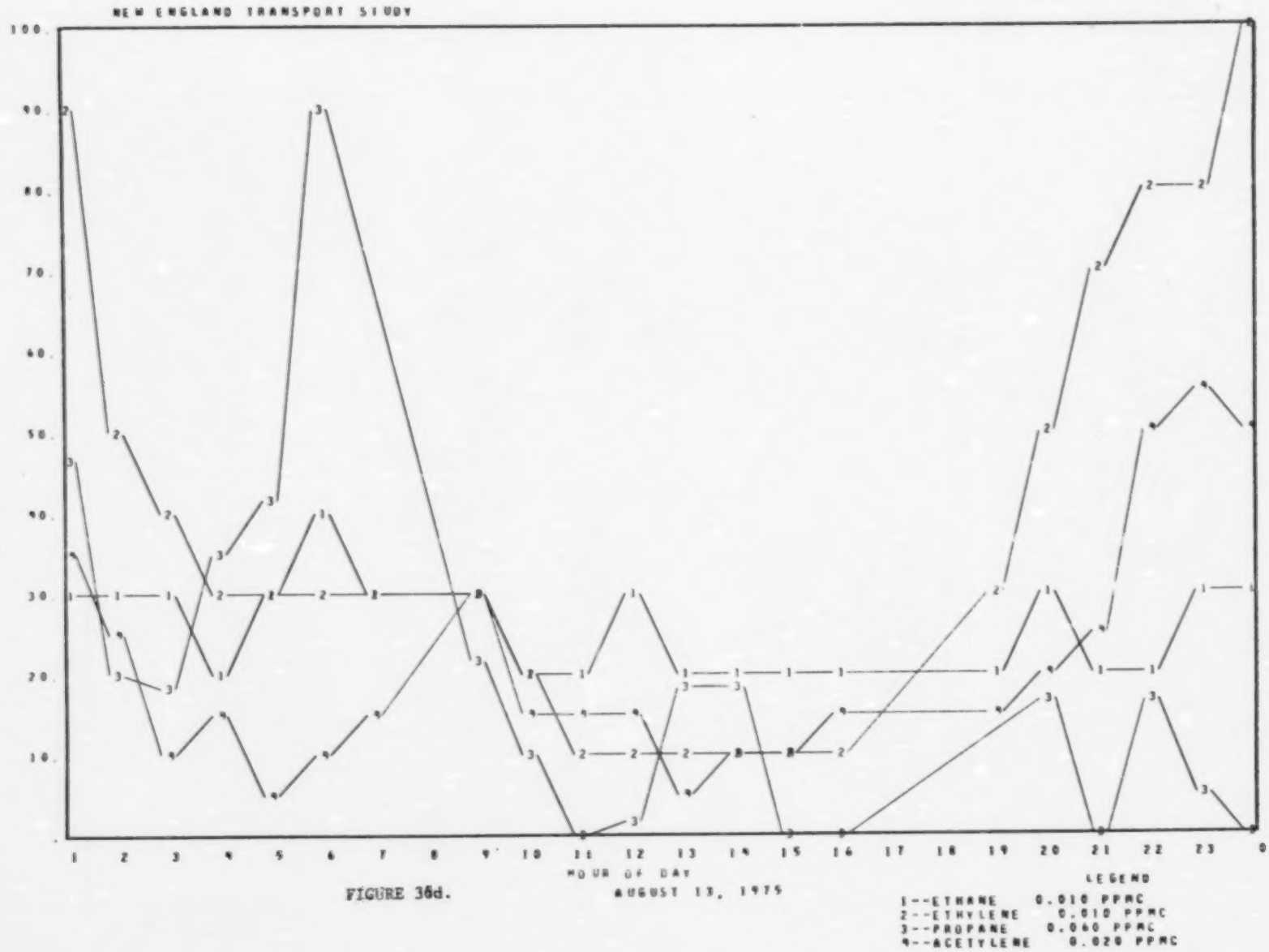

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 13, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.060 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 36d.

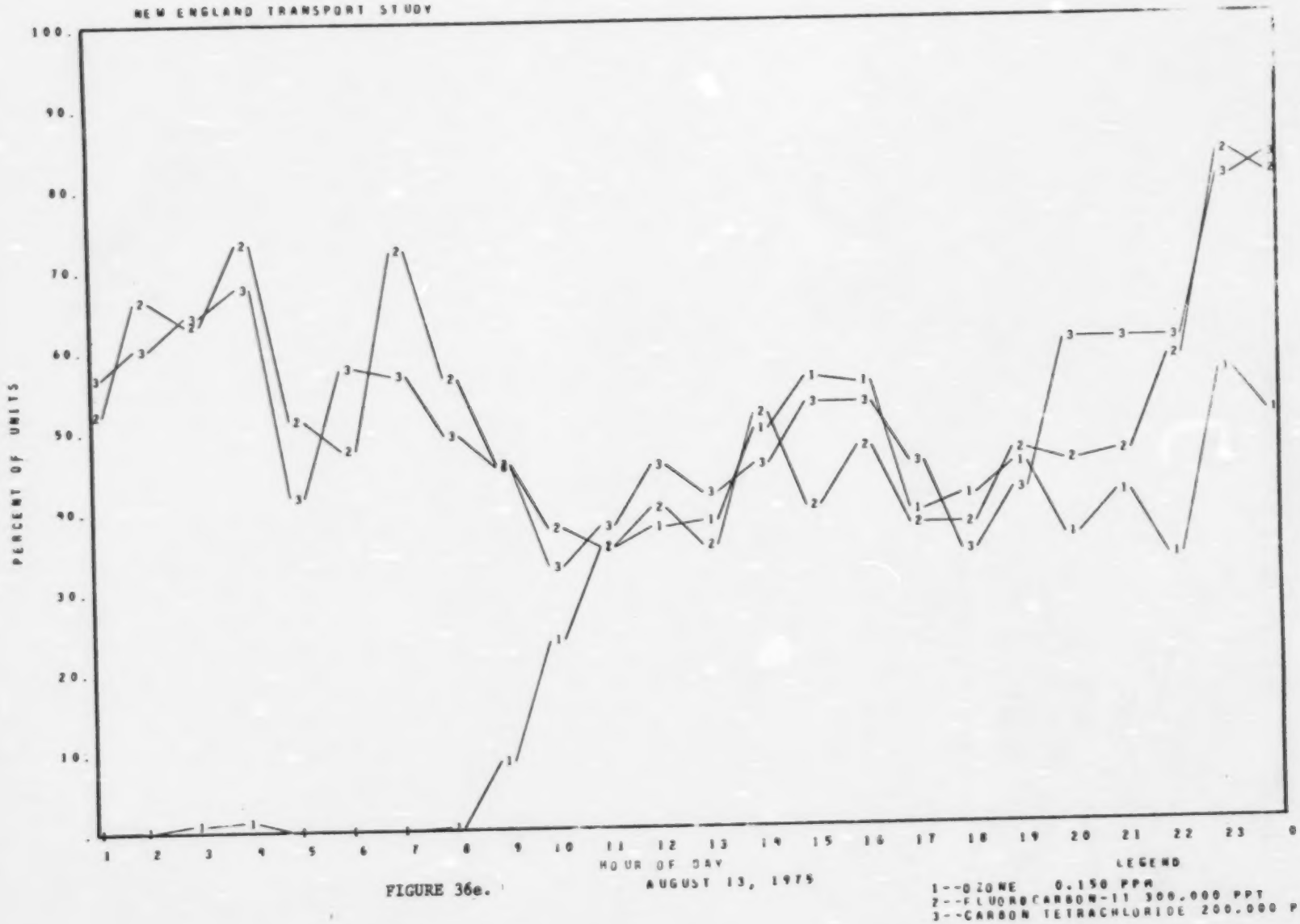
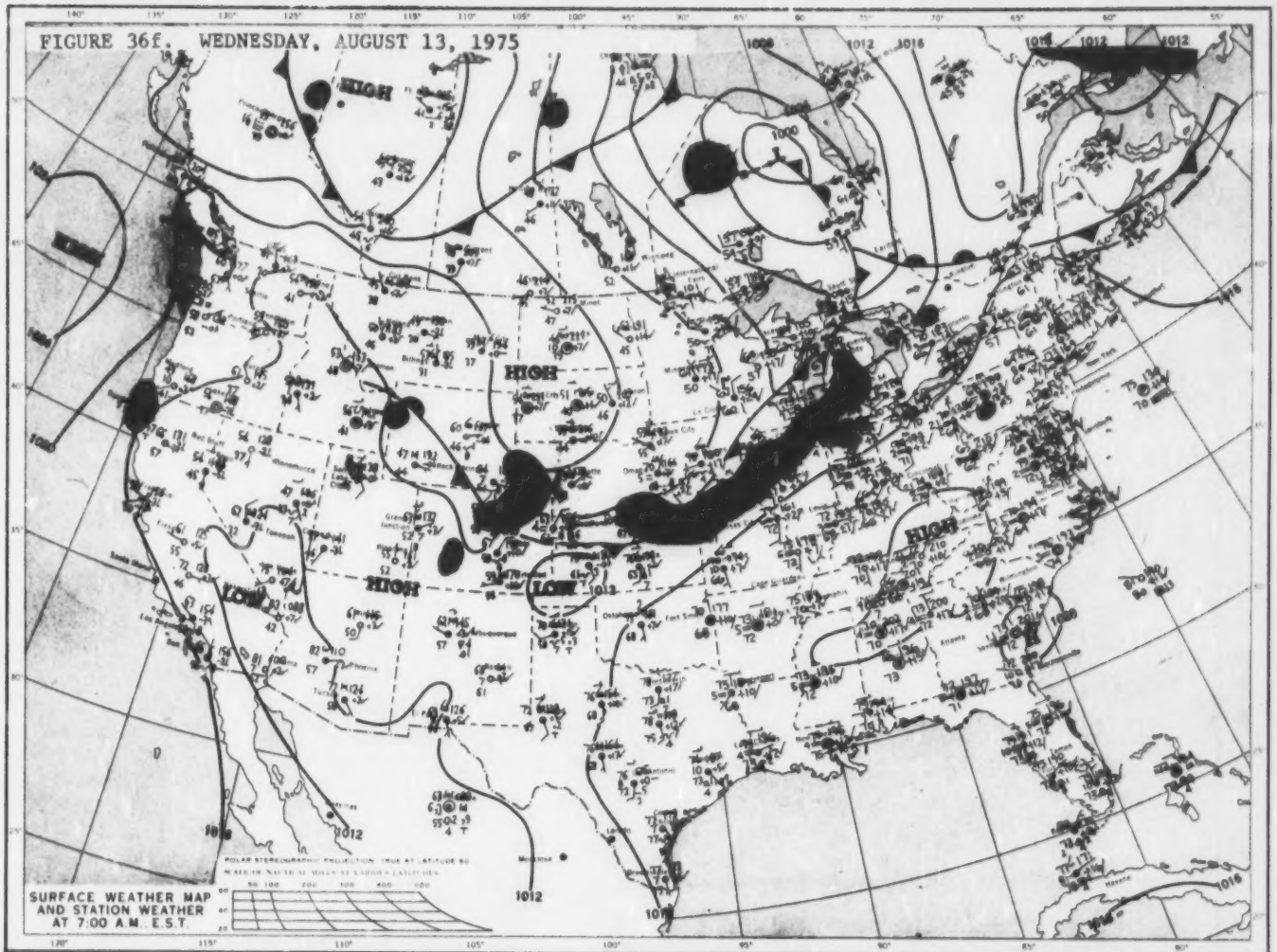

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 13, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 36e.

FIGURE 36f. WEDNESDAY, AUGUST 13, 1975



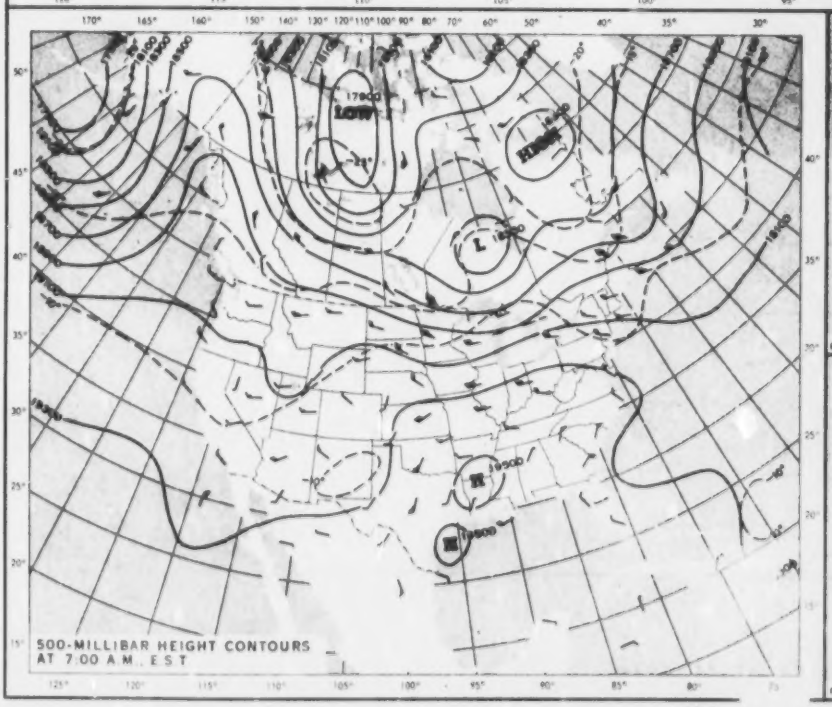


TABLE 33a. AUGUST 14, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.171	24
2--WIND SPEED (MPH)	3.329	24
3--WIND DIRECTION (DEGREES)	242.332	24
4--TEMPERATURE (CENTIGRADE)	25.647	24
5--RELATIVE HUMIDITY (PERCENT)	52.579	24
6--OZONE (PPM)	0.041	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.567	24
11--NON-METHANE HYDROCARBON (PPMC)	0.478	24
12--CARBON MONOXIDE (PPM)	0.126	22
13--ETHANE (PPMC)	0.002	21
14--ETHYLENE (PPMC)	0.002	21
15--PROPANE (PPMC)	0.002	21
16--ACETYLENE (PPMC)	0.002	21
19--FLUOROCARBON-11 (PPT)	133.	19
20--CARBON TETRACHLORIDE (PPT)	66.	20

TABLE 33b.

HOUR AVERAGES FOR AUGUST 14, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	[illegible]	[illegible]
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.150	0.800	1.950	3.325	[illegible]	[illegible]50
2--WIND SPEED (MPH)	1.100	2.800	1.500	2.300	0.900	0.600	1.100	1.800	0.600	4.400	3.[illegible]0	[illegible].200
3--WIND DIRECTION (DEGREES)	152.	147.	155.	236.	203.	252.	152.	126.	164.	192.	228.	269.
4--TEMPERATURE (CENTIGRADE)	24.	23.	23.	23.	22.	22.	22.	23.	25.	27.	29.	30.
5--RELATIVE HUMIDITY (PERCENT)	69.	67.	66.	64.	65.	69.	68.	66.	62.	57.	49.	44.
6--OZONE (PPM)	0.065	0.058	0.051	0.048	0.044	0.033	0.032	0.018	0.027	0.039	0.053	0.058
7--NITRIC OXIDE (PPM)	0.002	0.001	0.000	.000	.000	.000	.000	0.002	0.002	0.002	0.0[illegible]3	0.001
8--NITROGEN DIOXIDE (PPM)	0.007	0.003	0.002	0.002	0.001	0.003	0.003	0.009	0.004	0.003	0.0[illegible]	0.003
9--NITROGEN OXIDES (PPM)	0.009	0.004	0.003	0.002	0.001	0.003	0.003	0.011	0.006	0.005	0.007	0.004
10--METHANE (PPMC)	1.500	1.600	1.970	1.600	1.630	2.240	1.570	1.500	1.500	1.450	1.500	1.500
11--NON-METHANE HYDROCARBON (PPMC)	0.451	0.306	0.330	0.351	0.645	0.626	0.411	0.308	0.355	0.376	0.356	0.400
12--CARBON MONOXIDE (PPM)	0.525	0.250	0.150	0.087	0.050	0.050	0.100	0.237	0.188	0.162	0.[illegible]75	0.075
13--ETHANE (PPMC)	0.003	0.003	0.003	0.002	0.002	0.002	-0.002	-0.003	-0.003	0.004	0.005	0.006
14--ETHYLENE (PPMC)	0.006	0.002	0.001	0.001	0.001	0.002	-0.002	-0.001	-0.001	0.001	0.003	.000
15--PROPANE (PPMC)	0.002	0.004	0.006	0.007	.000	.000	-0.001	-0.003	-0.004	0.006	0.010	.000
16--ACETYLENE (PPMC)	0.005	0.003	0.001	0.002	0.001	0.003	-0.003	-0.002	-0.002	0.002	0.002	0.001
19--FLUOROCARBON-11 (PPT)	183.	150.	143.	111.	105.	144.	113.	128.	124.	114.	105.	118.
20--CARBON TETRACHLORIDE (PPT)	143.	120.	100.	90.	90.	98.	110.	75.	120.	128.	105.	120

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.850	7.100	6.350	5.475	3.775	3.050	1.300	0.300	0.100	.000	.000	.000
2--WIND SPEED (MPH)	6.400	6.500	8.400	7.000	5.800	7.200	4.100	4.200	1.500	1.600	1.100	1.500
3--WIND DIRECTION (DEGREES)	287.	280.	293.	287.	288.	316.	334.	331.	317.	255.	215.	289.
4--TEMPERATURE (CENTIGRADE)	31.	31.	32.	32.	31.	31.	28.	25.	22.	21.	19.	20.
5--RELATIVE HUMIDITY (PERCENT)	37.	33.	32.	29.	31.	34.	37.	42.	52.	59.	64.	62.
6--OZONE (PPM)	0.059	0.062	0.062	0.046	0.037	0.043	0.040	0.032	0.016	0.015	0.011	0.020
7--NITRIC OXIDE (PPM)	0.003	0.001	0.002	0.001	0.004	0.002	0.001	0.002	0.001	0.001	0.002	0.001
8--NITROGEN DIOXIDE (PPM)	0.002	0.001	0.001	0.003	0.005	0.003	0.003	0.002	0.007	0.010	0.006	0.004
9--NITROGEN OXIDES (PPM)	0.005	0.002	0.003	0.004	0.009	0.004	0.003	0.004	0.008	0.011	0.008	0.005
10--METHANE (PPMC)	1.450	1.350	1.350	1.300	1.300	1.300	1.300	1.500	1.500	2.060	2.000	1.650
11--NON-METHANE HYDROCARBON (PPMC)	0.359	0.446	0.471	0.526	0.447	0.460	0.463	1.960	0.446	0.340	0.395	0.243
12--CARBON MONOXIDE (PPM)	0.033	0.037	0.037	-0.056	0.075	0.025	0.017	-0.058	0.100	0.125	0.175	0.087
13--ETHANE (PPMC)	0.004	0.005	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001	.000	0.001
14--ETHYLENE (PPMC)	.000	0.001	0.001	0.001	0.004	0.001	0.001	0.001	0.004	0.004	0.003	0.002
15--PROPANE (PPMC)	.000	.000	.000	0.004	.000	.000	.000	.000	0.006	.000	.000	.000
16--ACETYLENE (PPMC)	0.001	0.001	.000	0.001	0.002	0.001	0.001	0.001	0.003	0.001	0.004	0.001
19--FLUOROCARBON-11 (PPT)	-117.	-117.	-116.	-116.	115.	150.	-140.	130.	110.	150.	200.	140.
20--CARBON TETRACHLORIDE (PPT)	-101.	-81.	-62.	-42.	23.	.	.	.	.	.	.	.

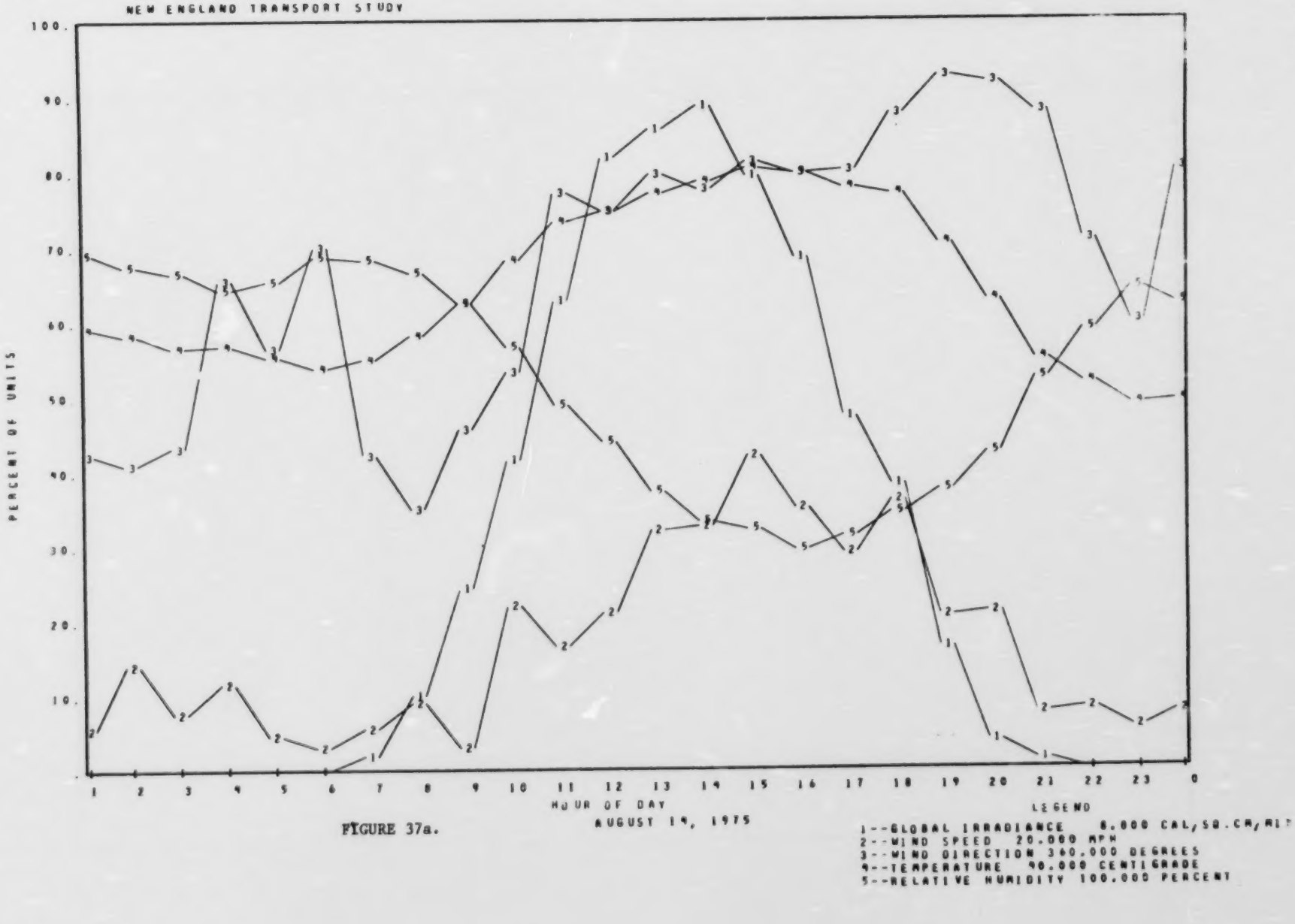

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 14, 1975
LEGEND
1--GLOBAL IRRADIANCE 8.000 CAL/SQ.CM/MI
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 37a.

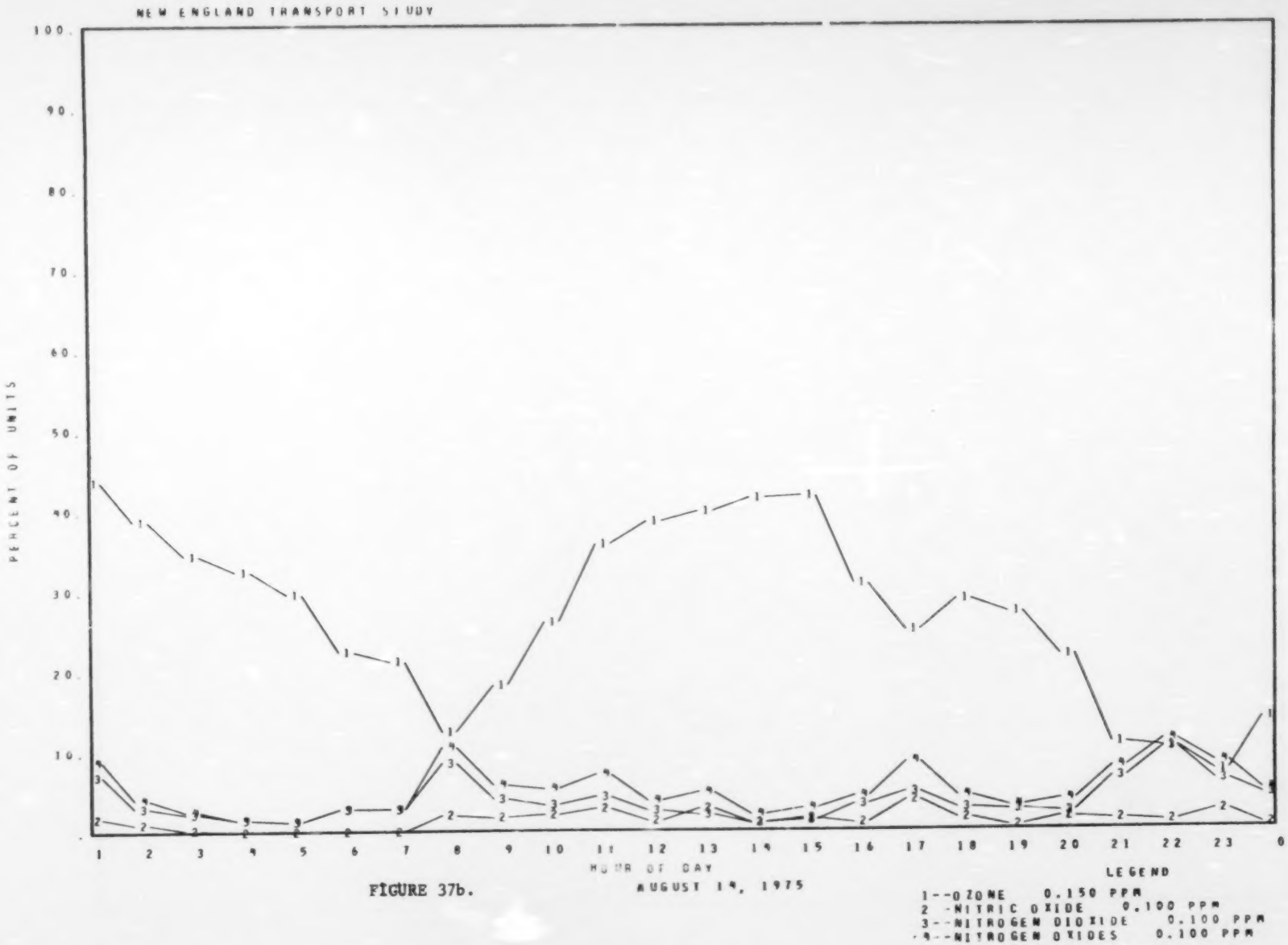

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 14, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 37b.

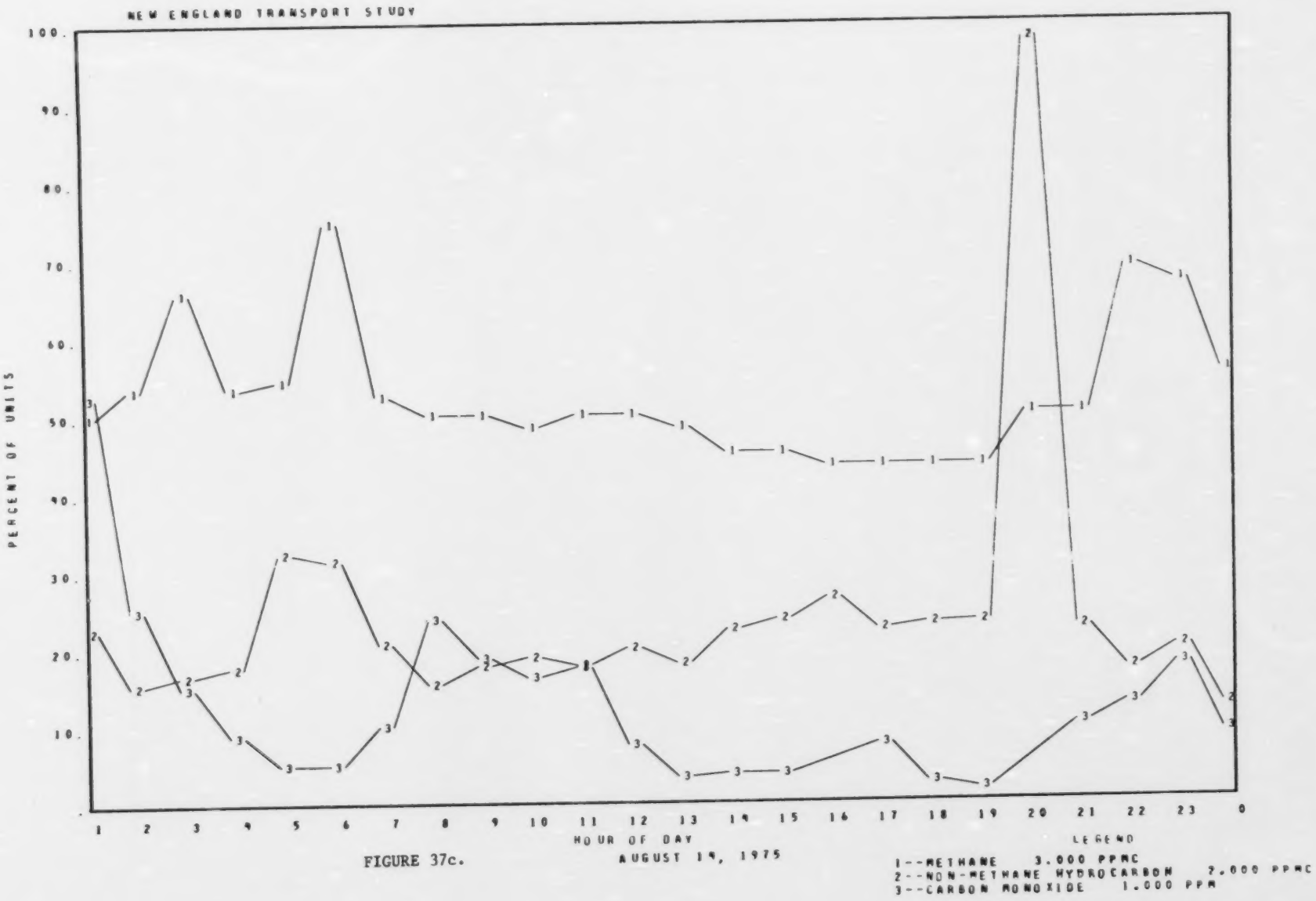

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 14, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 37c.

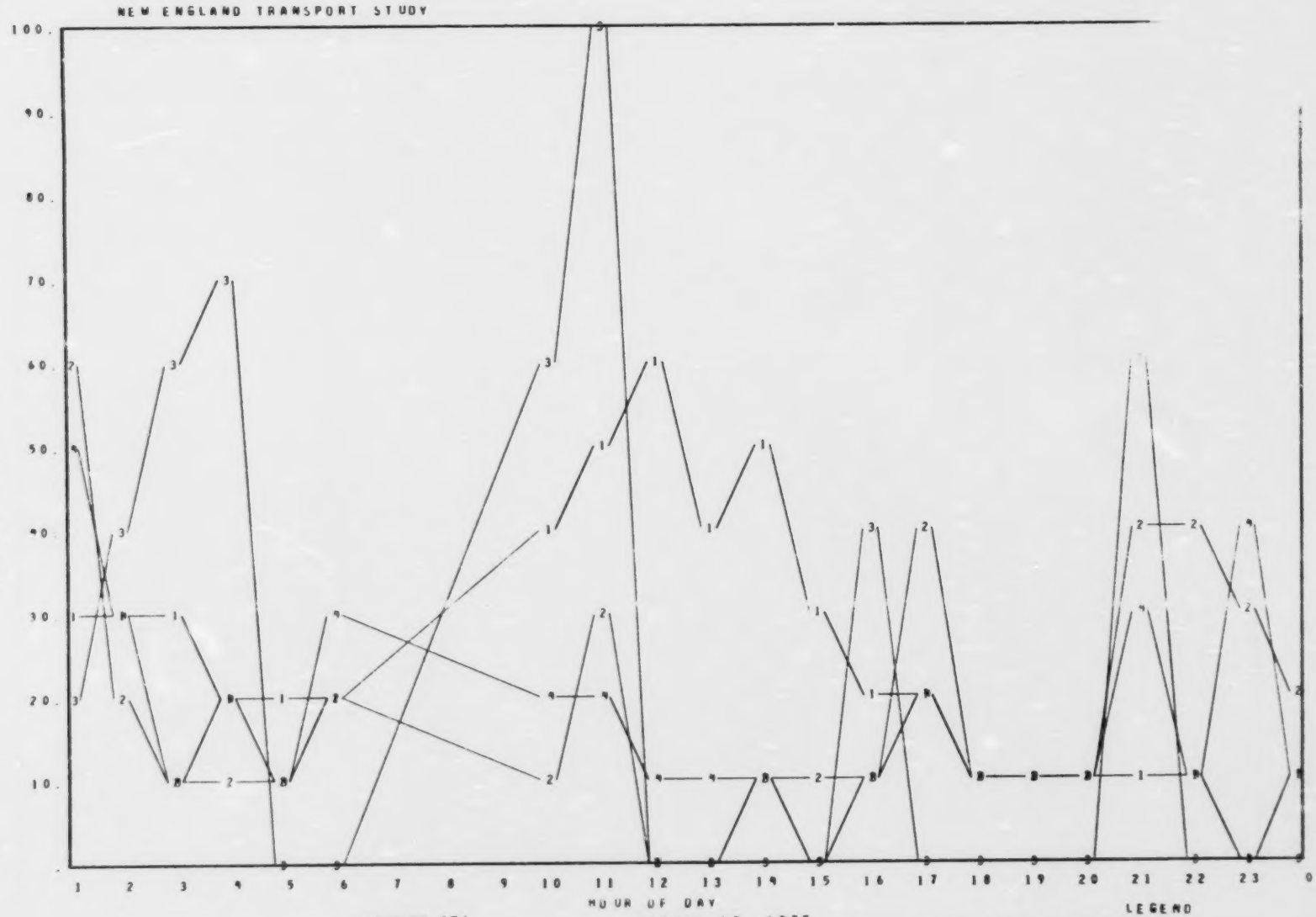

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 14, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.010 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 37d.

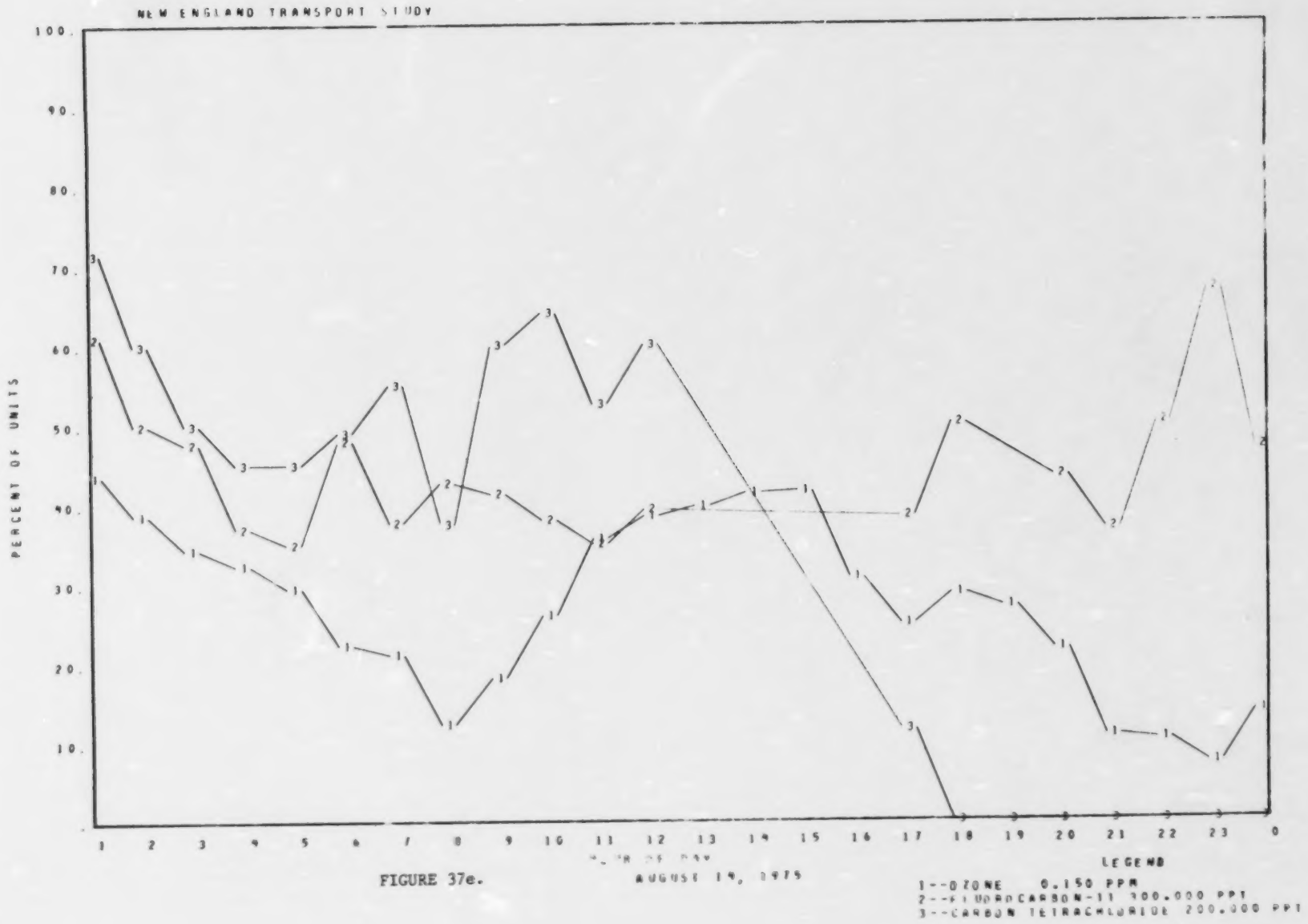

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
AUGUST 19, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 37e.

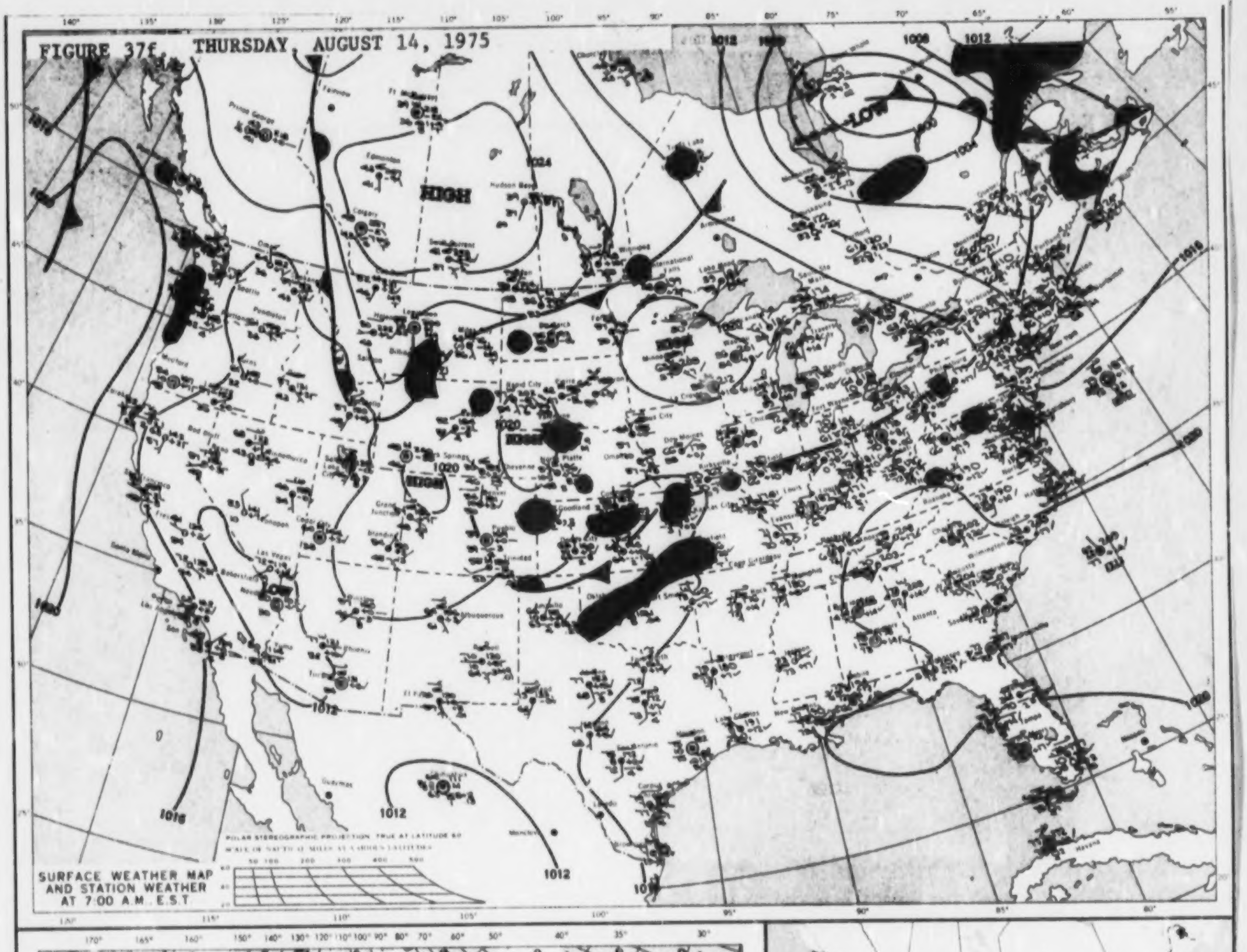


FIGURE 37f. THURSDAY, AUGUST 14, 1975
HIGH
LOW
1012
1016
1020
1024
SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.
POLAR STEREOGRAPHIC PROJECTION TRUE AT LATITUDE 60
500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.
HIGHEST AND LOWEST TEMPERATURES
PRECIPITATION AREAS AND AMOUNTS

TABLE 34a. AUGUST 15, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.178	24
2--WIND SPEED (MPH)	3.004	24
3--WIND DIRECTION (DEGREES)	242.719	24
4--TEMPERATURE (CENTIGRADE)	22.731	24
5--RELATIVE HUMIDITY (PERCENT)	56.036	24
6--OZONE (PPM)	0.021	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.006	24
10--METHANE (PPMC)	1.822	24
11--NON-METHANE HYDROCARBON (PPMC)	3.429	24
12--CARBON MONOXIDE (PPM)	0.118	24
13--ETHANE (PPMC)	0.002	23
14--ETHYLENE (PPMC)	0.003	23
15--PROPANE (PPMC)	0.016	24
16--ACETYLENE (PPMC)	0.002	23
19--FLUOROCARBON-11 (PPT)	119.	13
20--CARBON TETRACHLORIDE (PPT)	64.	13

TABLE 34b.

HOUR AVERAGES FOR AUGUST 15, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	0.025	0.225	1.775	3.500	4.725	5.775	7.050
2--WIND SPEED (MPH)	2.400	1.400	1.800	2.000	1.400	1.300	1.200	1.800	3.500	7.200	6.500	4.100
3--WIND DIRECTION (DEGREES)	328.	14.	264.	263.	304.	335.	265.	328.	351.	346.	3.	8.
4--TEMPERATURE (CENTIGRADE)	19.	18.	17.	16.	15.	15.	15.	19.	23.	24.	26.	28.
5--RELATIVE HUMIDITY (PERCENT)	65.	69.	73.	78.	83.	87.	87.	71.	55.	48.	41.	38.
6--OZONE (PPM)	0.018	0.014	0.011	0.008	0.005	.000	.000	0.001	0.023	0.038	0.044	0.051
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	0.000	0.000	0.004	0.007	0.006	0.002	0.001	.000
8--NITROGEN DIOXIDE (PPM)	0.002	0.002	0.001	0.001	0.003	0.004	0.004	0.006	0.003	0.001	0.003	0.003
9--NITROGEN OXIDES (PPM)	0.002	0.002	0.001	0.001	0.003	0.004	0.008	0.013	0.009	0.003	0.005	0.003
10--METHANE (PPMC)	1.475	1.520	1.986	3.645	2.806	2.411	4.731	2.105	1.471	1.445	1.373	1.341
11--NON-METHANE HYDROCARBON (PPMC)	0.320	0.298	0.396	0.335	0.316	0.468	0.672	0.505	0.320	0.275	0.368	0.369
12--CARBON MONOXIDE (PPM)	0.050	0.050	0.075	0.050	0.100	0.112	0.150	0.350	0.275	0.050	0.050	0.025
13--ETHANE (PPMC)	0.002	0.002	0.001	0.001	0.001	0.001	-0.002	0.003	0.001	0.001	0.002	0.001
14--ETHYLENE (PPMC)	0.004	0.002	0.002	0.003	0.001	0.001	-0.002	0.004	0.004	0.001	0.001	0.001
15--PROPANE (PPMC)	0.012	0.004	0.008	0.006	0.004	0.021	0.115	0.036	0.051	0.012	0.004	0.002
16--ACETYLENE (PPMC)	0.004	0.001	.000	0.001	0.001	0.001	-0.003	0.005	0.003	0.002	0.001	0.002
19--FLUOROCARBON-11 (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	220.	200.	120.	100.
20--CARBON TETRACHLORIDE (PPT)	-1.	-1.	-1.	-1.	-1.	-1.	-1.	-1.	30.	15.	30.	.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.125	7.125	6.400	3.950	2.675	1.300	0.375	0.150	0.100	.000	.000	.000
2--WIND SPEED (MPH)	4.000	3.600	4.000	3.100	3.400	2.600	5.000	4.300	3.400	2.100	0.700	1.300
3--WIND DIRECTION (DEGREES)	12.	29.	231.	277.	210.	295.	325.	347.	344.	322.	306.	319.
4--TEMPERATURE (CENTIGRADE)	29.	30.	31.	31.	29.	27.	25.	23.	22.	21.	21.	20.
5--RELATIVE HUMIDITY (PERCENT)	35.	30.	29.	30.	34.	43.	49.	50.	57.	60.	63.	70.
6--OZONE (PPM)	0.058	0.048	0.046	0.051	0.038	0.019	0.017	0.012	0.003	0.000	.000	0.001
7--NITRIC OXIDE (PPM)	0.006	.000	.000	.000	0.004	0.008	0.004	0.002	0.004	0.005	0.003	0.002
8--NITROGEN DIOXIDE (PPM)	.000	0.001	0.000	0.001	0.004	0.006	0.005	0.005	0.009	0.006	0.007	0.008
9--NITROGEN OXIDES (PPM)	0.006	0.001	0.000	0.001	0.008	0.015	0.009	0.008	0.013	0.011	0.010	0.010
10--METHANE (PPMC)	1.329	1.365	1.328	1.338	1.380	1.411	1.419	1.378	1.380	1.398	1.430	2.253
11--NON-METHANE HYDROCARBON (PPMC)	0.458	0.693	0.562	0.498	0.515	0.434	0.392	0.373	0.403	0.382	0.377	0.579
12--CARBON MONOXIDE (PPM)	.000	.000	.000	.000	0.125	0.325	0.262	0.100	0.200	0.175	0.162	0.150
13--ETHANE (PPMC)	0.001	0.001	0.002	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.001	0.002
14--ETHYLENE (PPMC)	0.002	.000	0.002	.000	0.001	0.004	0.002	0.003	0.007	0.003	0.005	0.006
15--PROPANE (PPMC)	0.004	0.004	.000	0.004	0.006	0.002	0.008	0.008	0.012	0.011	0.009	0.033
16--ACETYLENE (PPMC)	0.002	.000	0.002	0.001	0.002	0.003	0.003	0.002	0.005	0.002	0.002	0.003
19--FLUOROCARBON-11 (PPT)	-97.	-94.	-91.	88.	85.	86.	83.	88.	96.	86.	90.	200.
20--CARBON TETRACHLORIDE (PPT)	-17.	-34.	-51.	68.	80.	68.	105.	80.	53.	70.	105.	128.

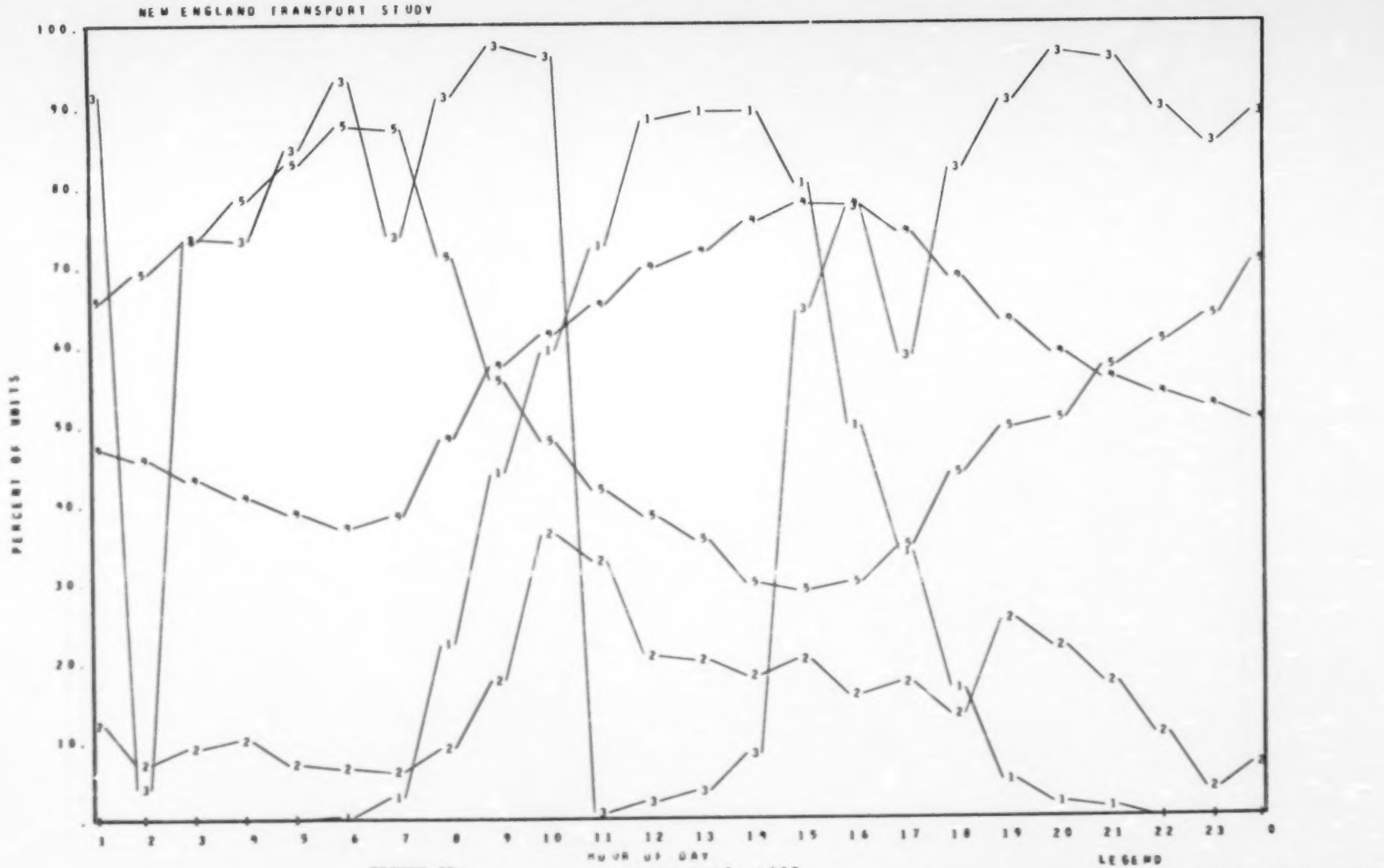

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 15, 1975
LEGEND
1--GLOBAL IRRADIANCE 0.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 40.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 38a.

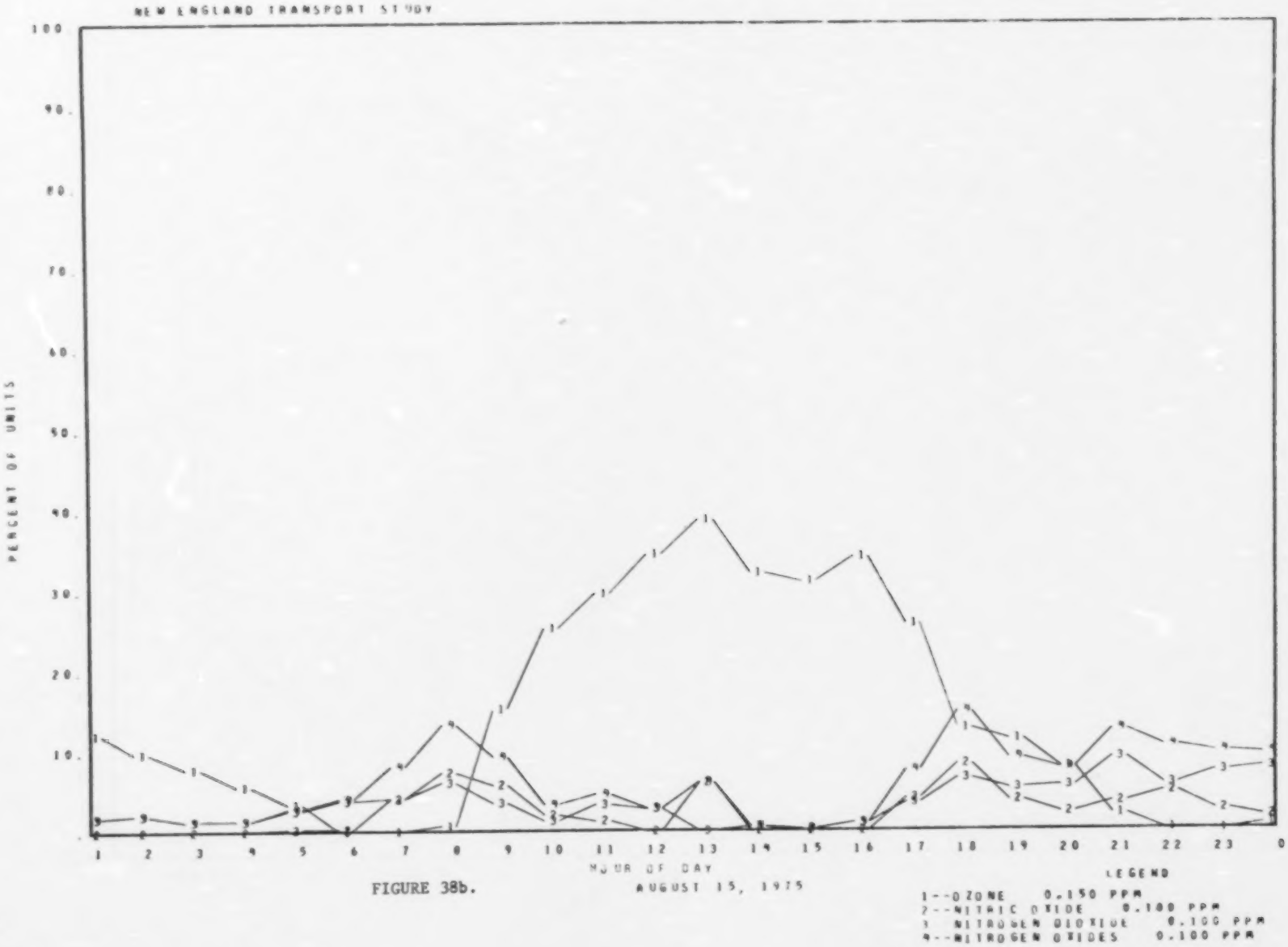

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 15, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 38b.

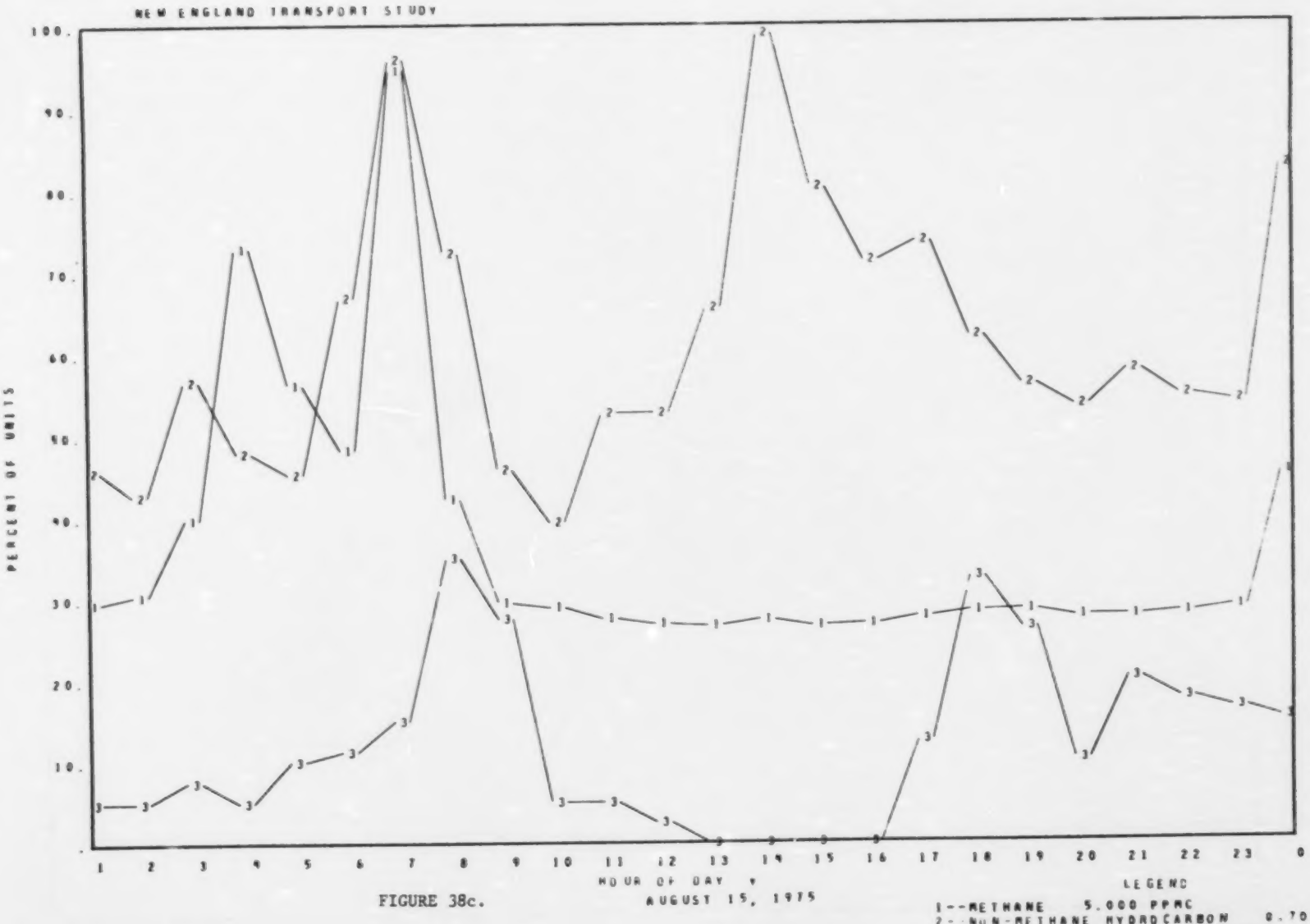

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 15, 1975
LEGEND
1--METHANE 5.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3- CARBON MONOXIDE 1.000 PPM

FIGURE 38c.

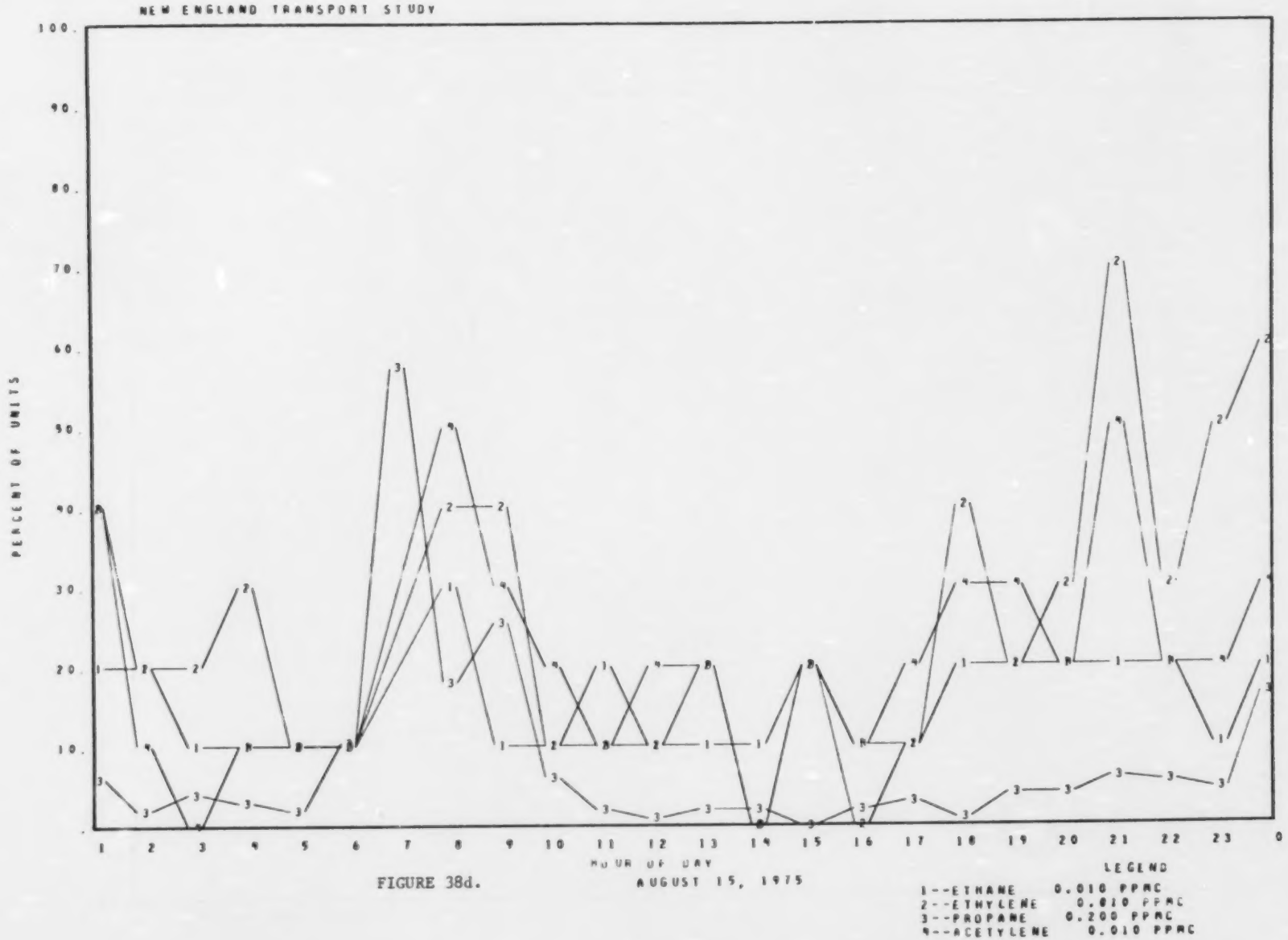

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 15, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.200 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 38d.

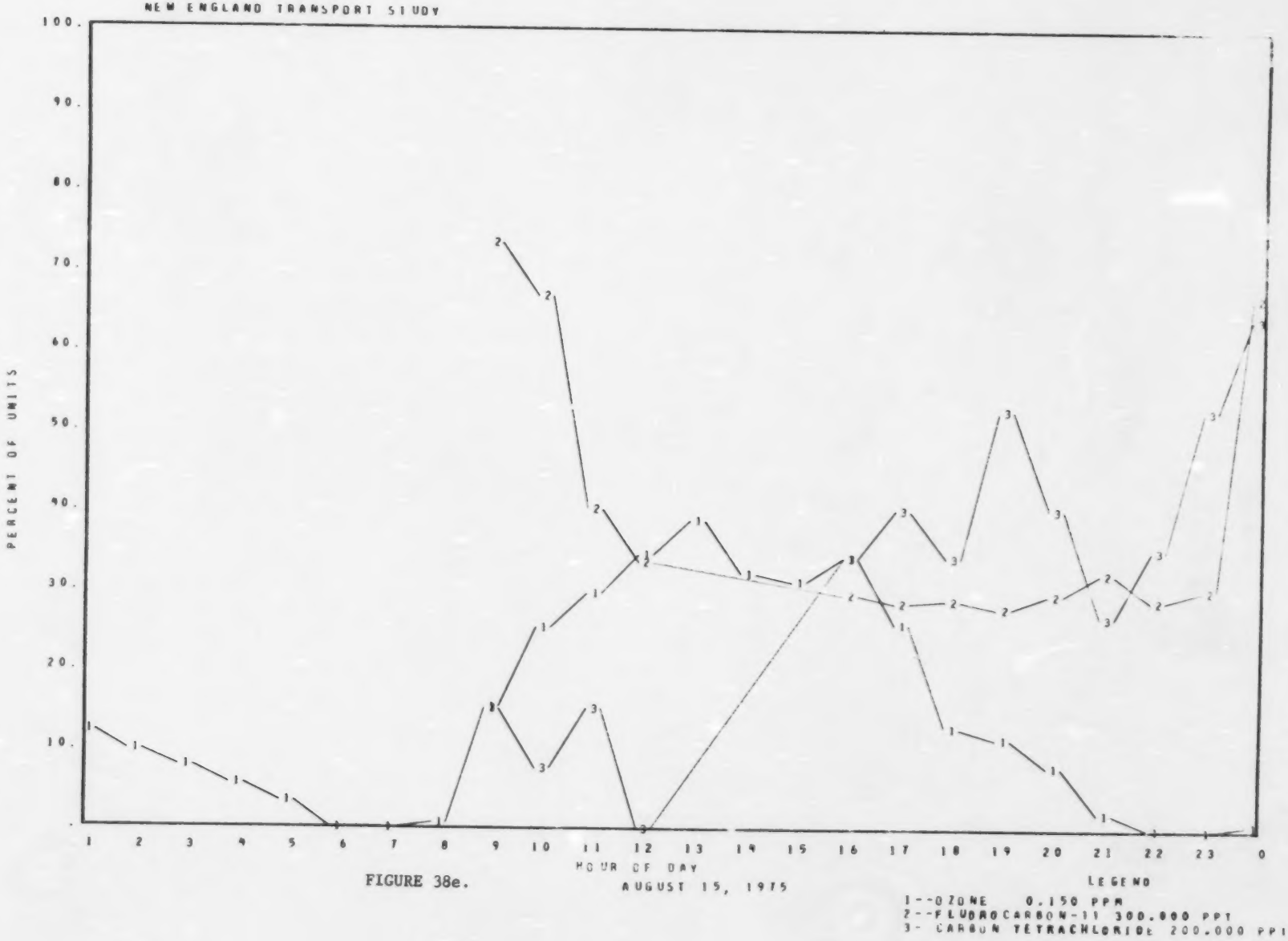
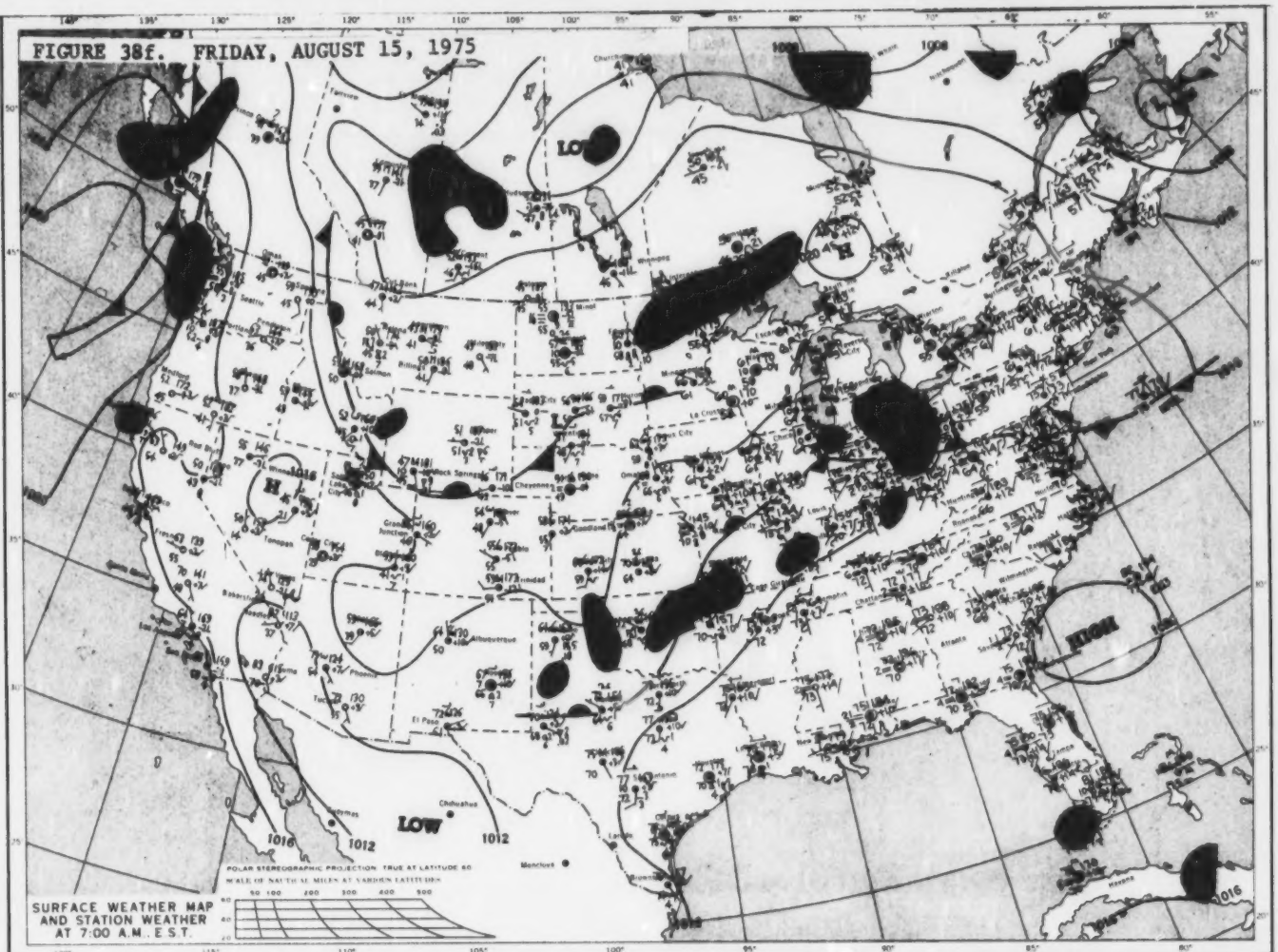

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 15, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 300.000 PPT
3- CARBON TETRACHLORIDE 200.000 PPT

FIGURE 38e.

FIGURE 38f. FRIDAY, AUGUST 15, 1975



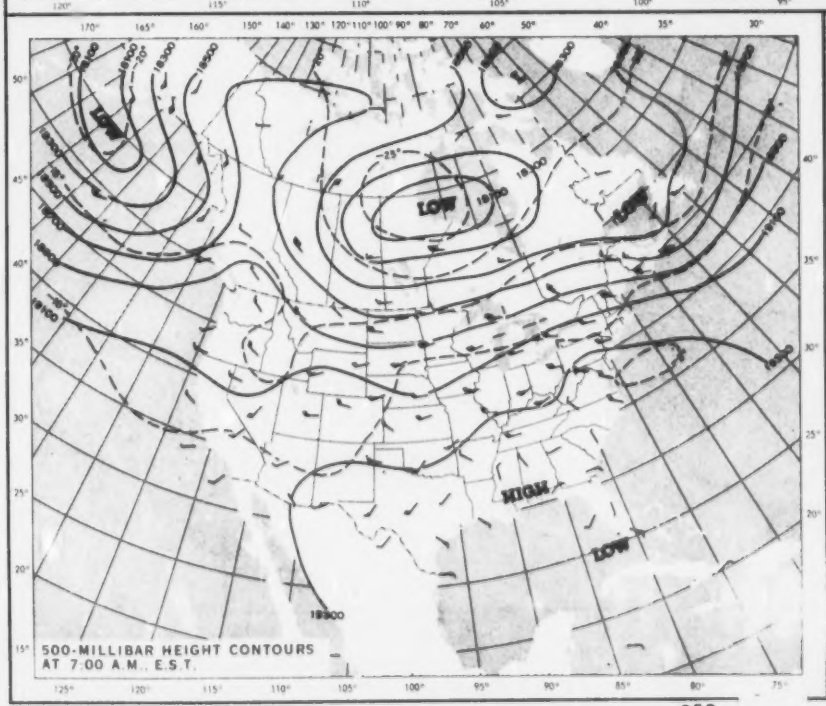


TABLE 35a. AUGUST 16, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.719	24
2--WIND SPEED (MPH)	2.721	24
3--WIND DIRECTION (DEGREES)	247.436	24
4--TEMPERATURE (CENTIGRADE)	19.508	24
5--RELATIVE HUMIDITY (PERCENT)	76.530	24
6--OZONE (PPM)	0.019	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.007	24
10--METHANE (PPMC)	1.544	24
11--NON-METHANE HYDROCARBON (PPMC)	0.345	24
12--CARBON MONOXIDE (PPM)	0.143	18
13--ETHANE (PPMC)	0.001	24
14--ETHYLENE (PPMC)	0.003	24
15--PROPANE (PPMC)	0.008	24
16--ACETYLENE (PPMC)	0.003	24
19--FLUOROCARBON-11 (PPT)	96.	24
20--CARBON TETRACHLORIDE (PPT)	86.	24

TABLE 35b.

HOUR AVERAGES FOR AUGUST 16, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.100	0.150	0.400	0.700	1.000	1.100
2--WIND SPEED (MPH)	1.800	2.500	3.200	2.500	2.800	2.500	2.300	1.200	3.600	4.900	3.500	2.100
3--WIND DIRECTION (DEGREES)	323.	341.	335.	339.	349.	350.	266.	236.	351.	343.	1.	225.
4--TEMPERATURE (CENTIGRADE)	19.	19.	19.	19.	18.	18.	18.	17.	18.	18.	19.	19.
5--RELATIVE HUMIDITY (PERCENT)	73.	73.	74.	74.	73.	72.	75.	86.	97.	91.	89.	86.
6--OZONE (PPM)	0.003	0.005	0.003	0.005	0.008	0.009	0.005	0.003	0.007	0.008	0.010	0.012
7--NITRIC OXIDE (PPM)	0.002	0.001	.000	.000	.000	.000	0.002	0.003	0.004	0.004	0.003	0.002
8--NITROGEN DIOXIDE (PPM)	0.008	0.006	0.007	0.005	0.003	0.002	0.004	0.005	0.004	0.005	0.006	0.005
9--NITROGEN OXIDES (PPM)	0.009	0.007	0.007	0.005	0.003	0.002	0.006	0.008	0.008	0.009	0.009	0.007
10--METHANE (PPMC)	1.641	1.448	1.471	1.468	1.431	1.418	1.511	1.773	1.431	1.398	1.465	1.480
11--NON-METHANE HYDROCARBON (PPMC)	0.307	0.302	0.357	0.282	0.273	0.265	0.305	0.423	0.297	0.318	0.333	0.387
12--CARBON MONOXIDE (PPM)	0.150	0.100	0.112	0.075	0.050	0.050	0.112	0.125	0.125	0.138	0.100	0.117
13--ETHANE (PPMC)	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
14--ETHYLENE (PPMC)	0.005	0.003	0.002	0.001	0.001	0.002	0.003	0.008	0.001	0.001	0.002	0.001
15--PROPANE (PPMC)	0.032	0.043	0.025	0.017	0.010	0.014	0.006	0.016	.000	0.007	0.005	.000
16--ACETYLENE (PPMC)	0.002	0.002	0.002	0.002	0.001	0.003	0.002	0.003	0.001	0.001	.002	0.001
19--FLUOROCARBON-11 (PPT)	96.	86.	85.	80.	79.	77.	76.	87.	84.	83.	85.	91.
20--CARBON TETRACHLORIDE (PPT)	100.	85.	75.	70.	70.	60.	80.	110.	65.	68.	90.	80.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.775	4.300	3.800	1.875	1.075	0.600	0.225	0.100	0.050	.000	.000	.000
2--WIND SPEED (MPH)	2.000	2.300	4.300	3.700	3.100	2.700	2.400	2.300	3.500	1.800	2.400	1.900
3--WIND DIRECTION (DEGREES)	267.	196.	192.	197.	176.	202.	193.	198.	200.	235.	206.	216.
4--TEMPERATURE (CENTIGRADE)	20.	23.	23.	22.	22.	21.	21.	20.	19.	19.	19.	19.
5--RELATIVE HUMIDITY (PERCENT)	82.	62.	60.	64.	65.	70.	74.	77.	79.	81.	81.	82.
6--OZONE (PPM)	0.017	0.032	0.046	0.044	0.046	0.040	0.036	0.023	0.021	0.024	0.024	0.022
7--NITRIC OXIDE (PPM)	0.005	0.001	.000	0.000	.000	0.001	.000	.000	0.000	0.001	0.001	0.000
8--NITROGEN DIOXIDE (PPM)	0.005	0.004	0.005	0.006	0.006	0.008	0.009	0.011	0.010	0.008	0.007	0.007
9--NITROGEN OXIDES (PPM)	0.010	0.005	0.005	0.006	0.006	0.009	0.009	0.011	0.011	0.009	0.007	0.007
10--METHANE (PPMC)	1.386	1.358	1.420	1.391	1.443	1.578	1.703	2.046	1.763	1.650	1.718	1.783
11--NON-METHANE HYDROCARBON (PPMC)	0.352	0.396	0.350	0.410	0.347	0.365	0.395	0.415	0.338	0.361	0.386	0.322
12--CARBON MONOXIDE (PPM)	0.100	-0.116	-0.132	-0.148	-0.164	-0.180	-0.196	0.212	0.200	0.275	0.237	0.187
13--ETHANE (PPMC)	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.002	0.002	0.001	0.001
14--ETHYLENE (PPMC)	0.008	0.002	0.001	0.003	0.004	0.004	0.005	0.004	0.003	0.011	0.003	0.004
15--PROPANE (PPMC)	.000	.000	.000	.000	.000	.000	0.002	0.001	.000	0.005	.000	.000
16--ACETYLENE (PPMC)	0.004	0.004	0.002	0.003	0.004	0.005	0.007	0.004	0.005	0.006	0.004	0.003
19--FLUOROCARBON-11 (PPT)	97.	88.	98.	100.	104.	118.	117.	116.	110.	117.	106.	116.
20--CARBON TETRACHLORIDE (PPT)	113.	90.	65.	68.	80.	105.	105.	95.	110.	98.	80.	100.

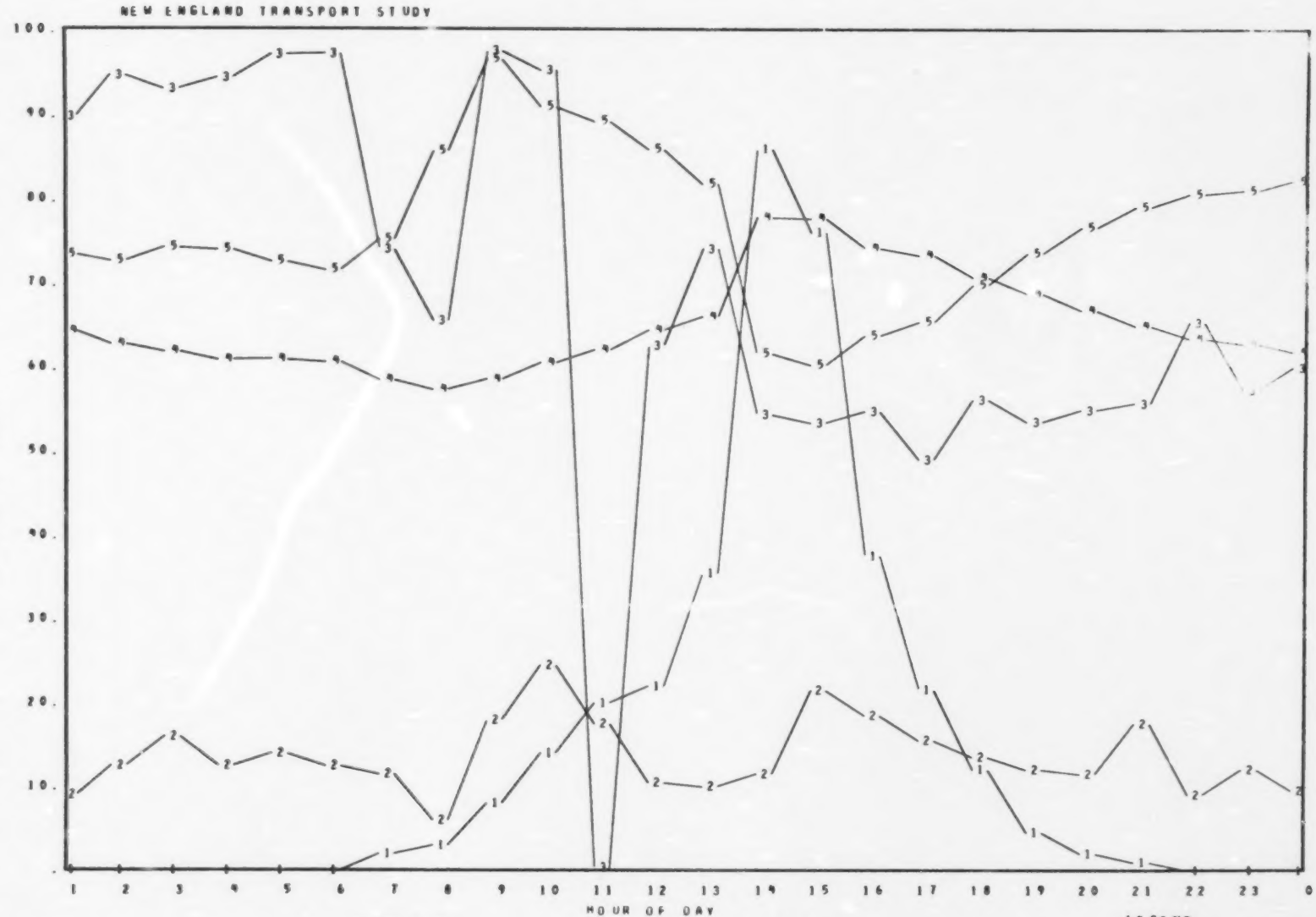
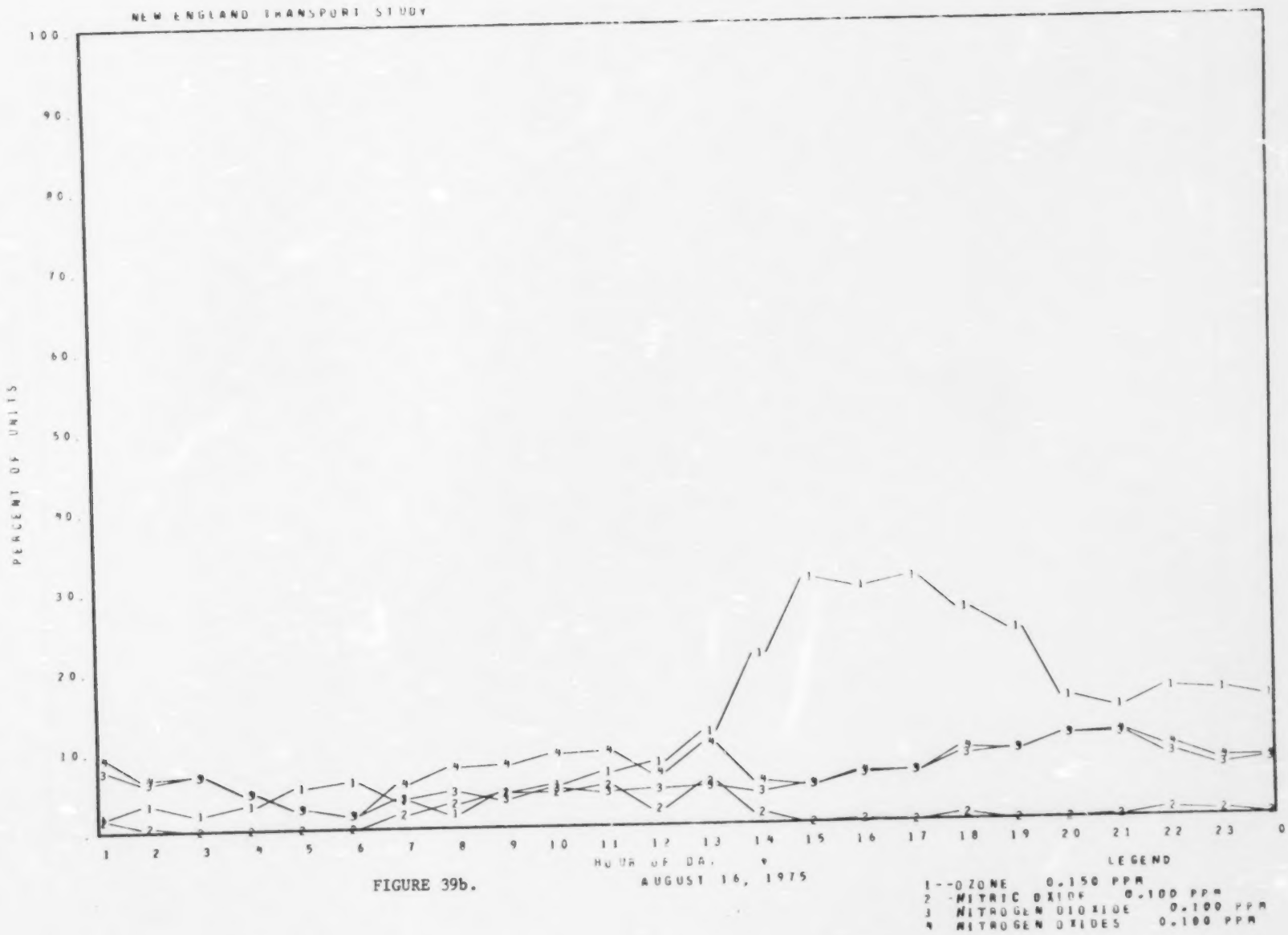

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 16, 1975
LEGEND
1--GLOBAL IRRADIANCE 5.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 39a


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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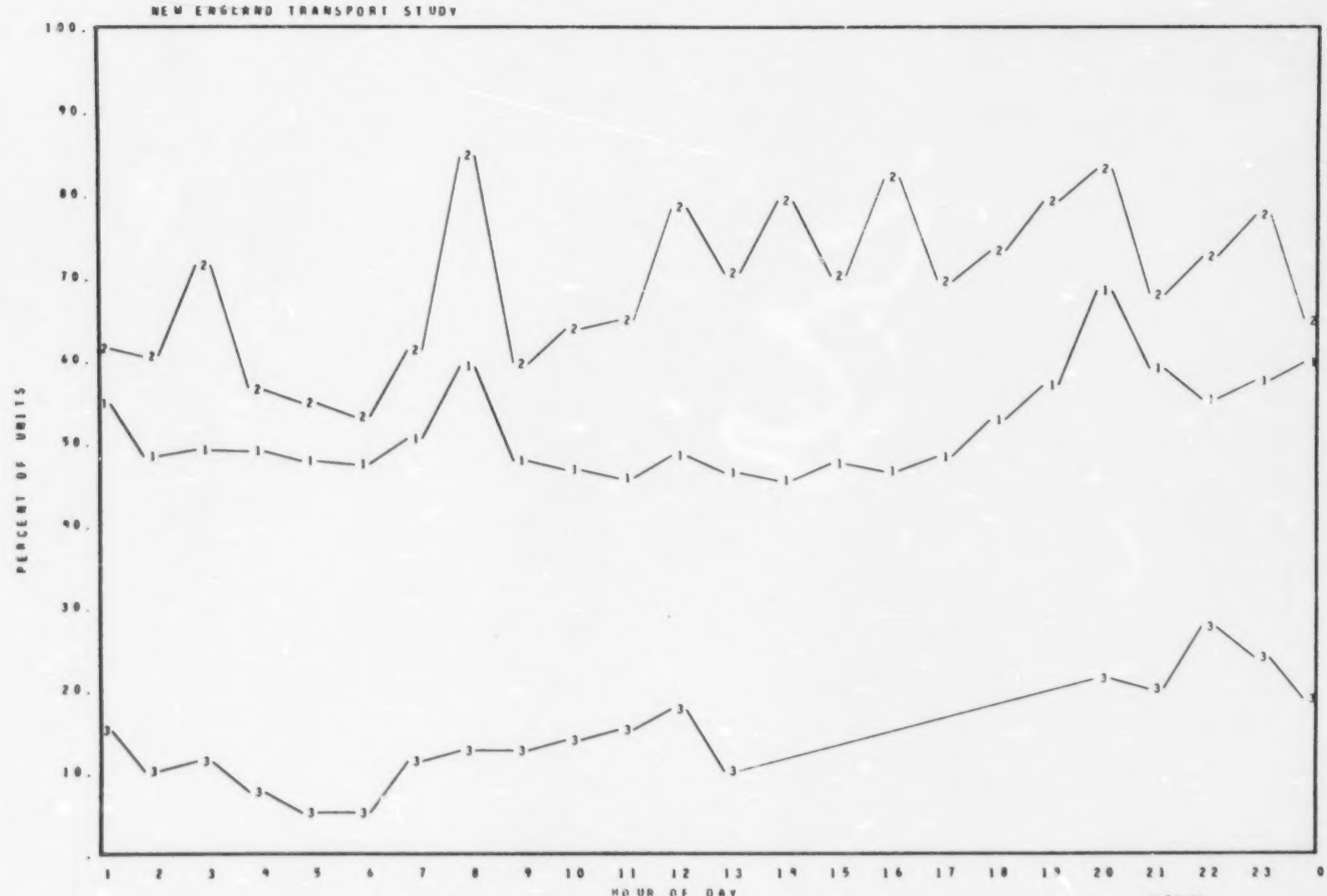
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 16, 1975
LEGEND
1--OZONE 0.150 PPM
2 -NITRIC OXIDE 0.100 PPM
3 NITROGEN DIOXIDE 0.100 PPM
4 NITROGEN OXIDES 0.100 PPM

FIGURE 39b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 16, 1975
LEGEND
1--METHANE 3.000 PPMC.
2--NON-METHANE HYDROCARBON 6.500 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 39c.

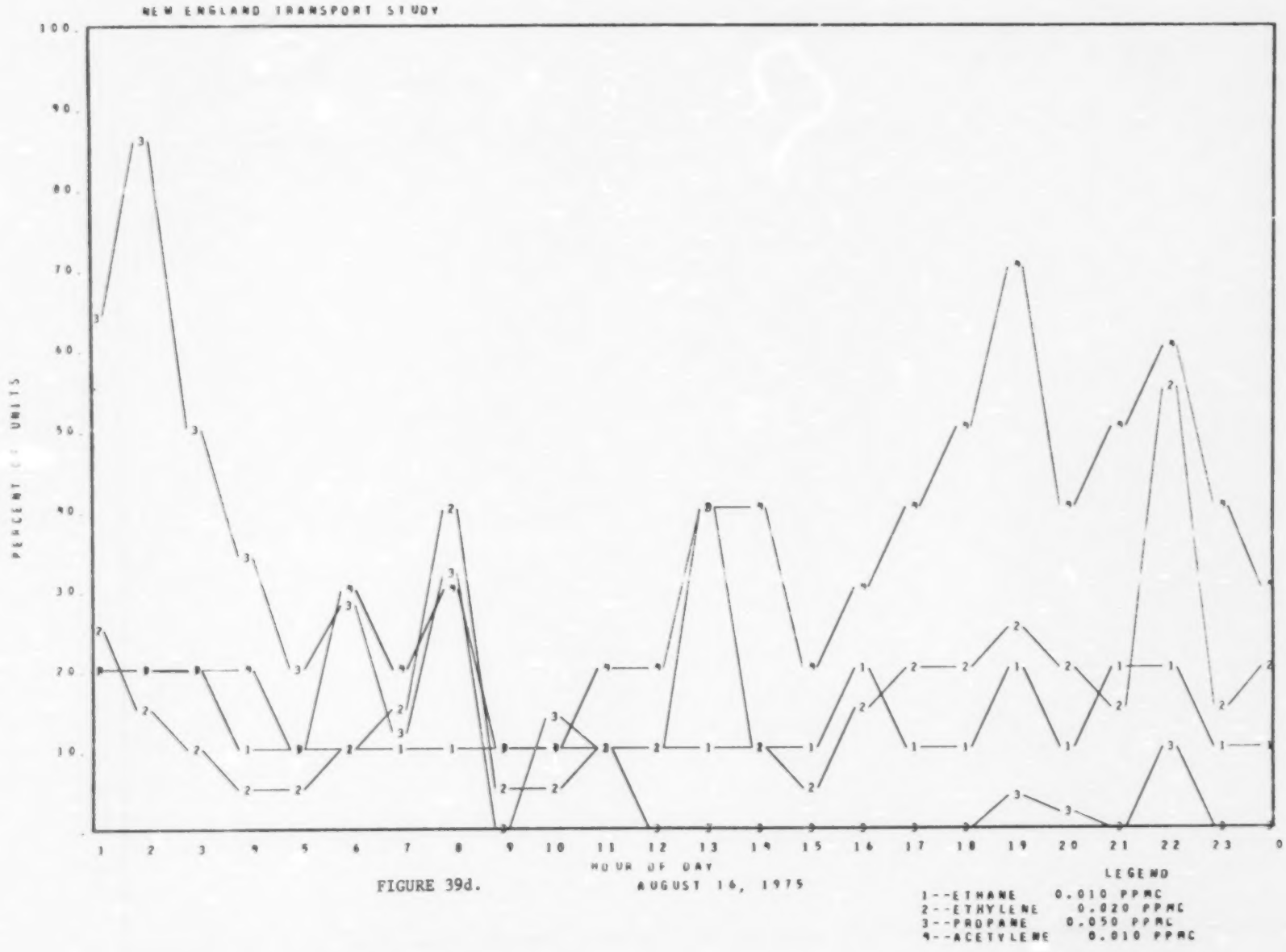

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 16, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.050 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 39d.

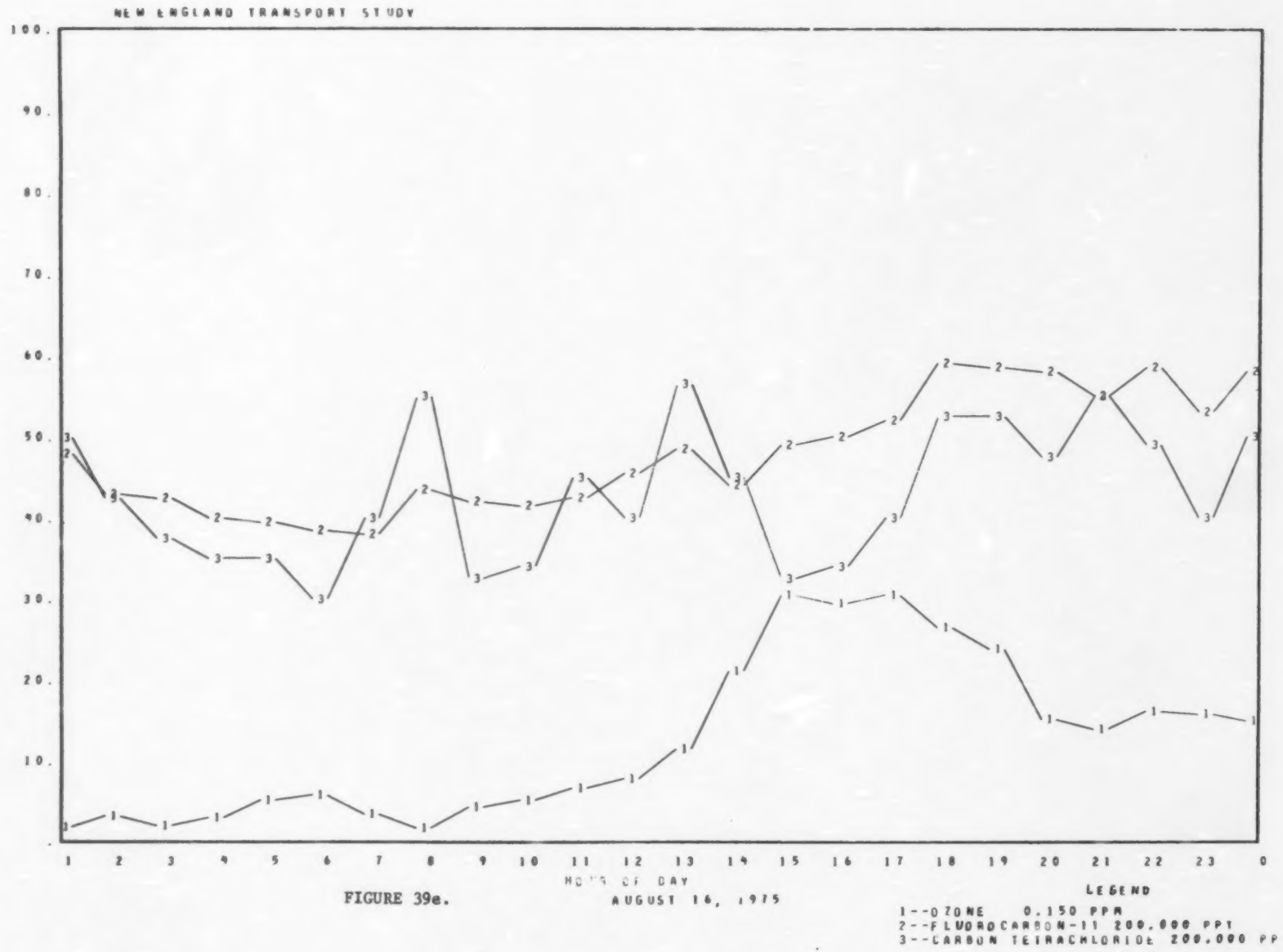
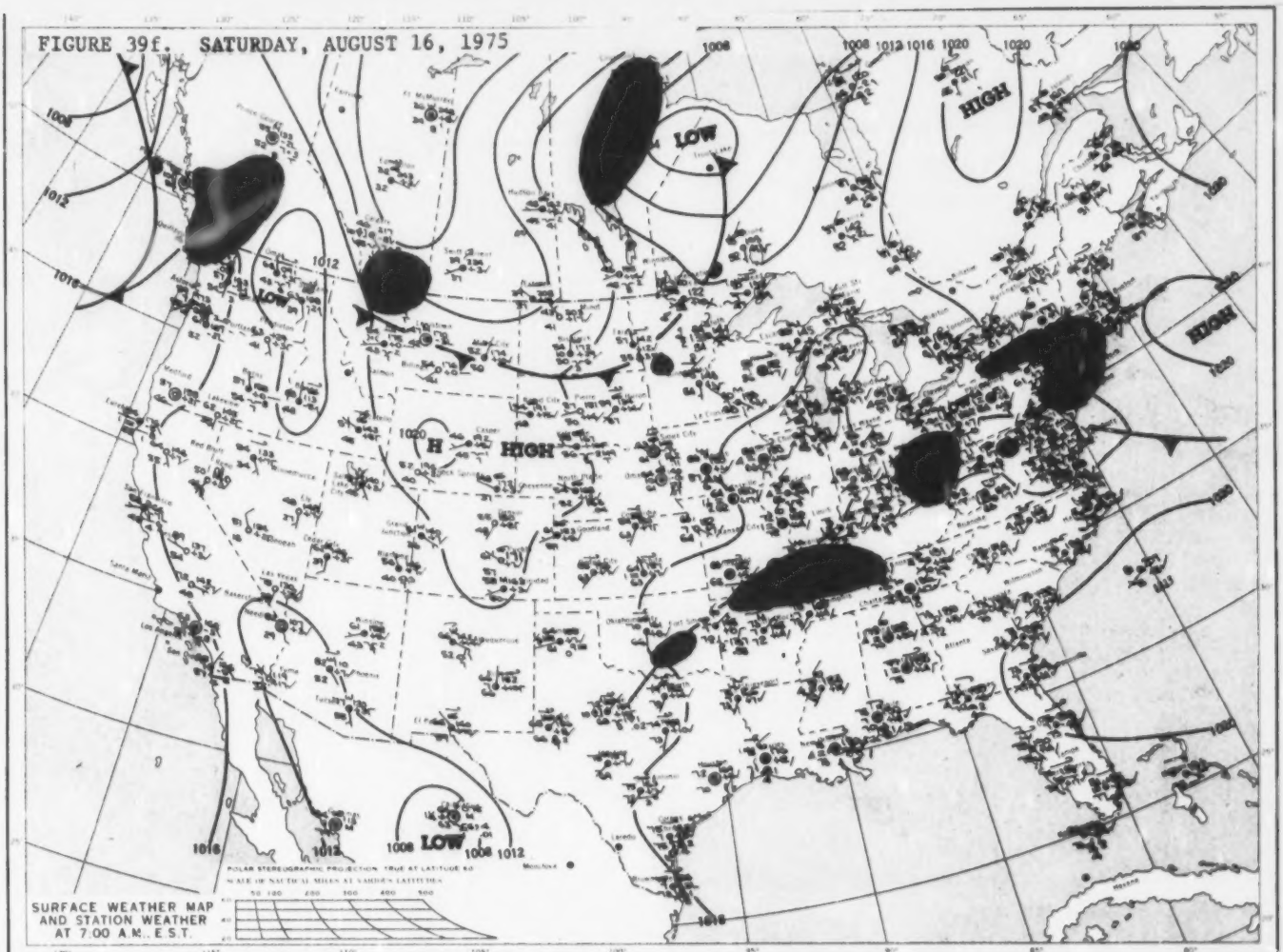
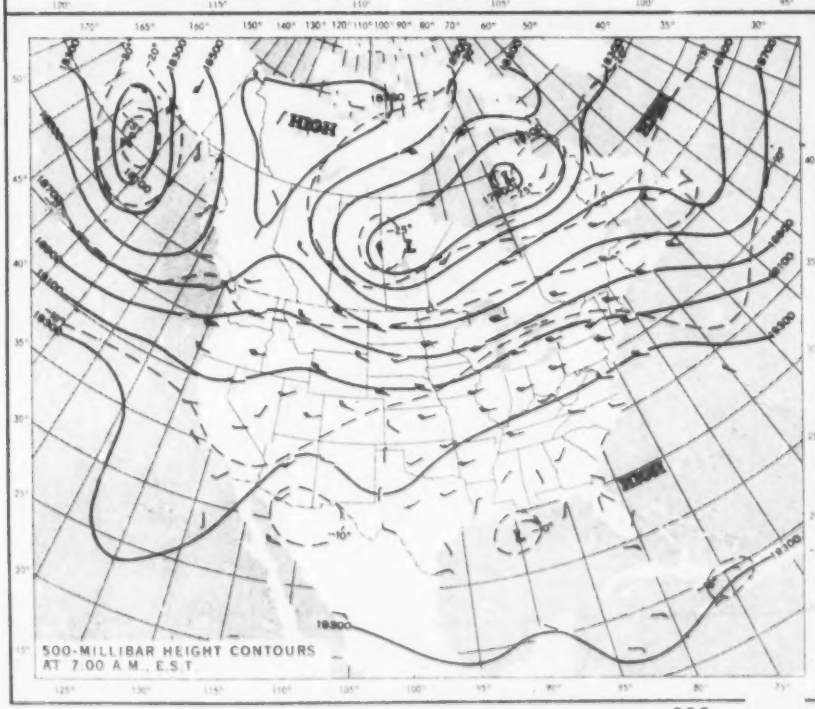

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOURS OF DAY
AUGUST 14, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 39e.

FIGURE 39f. SATURDAY, AUGUST 16, 1975

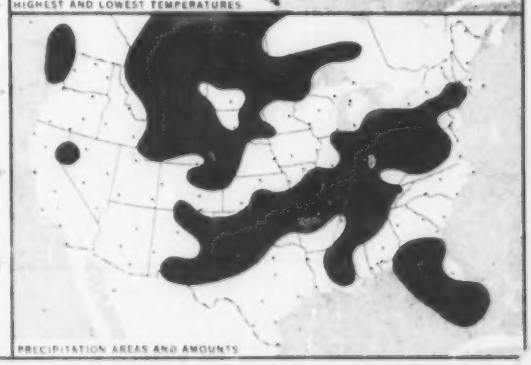


SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M., E.S.T.



500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M., E.S.T.

HIGHEST AND LOWEST TEMPERATURES



PRECIPITATION AREAS AND AMOUNTS

TABLE 36a. AUGUST 17, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	0.558	24
2--WIND SPEED (MPH)	1.631	24
3--WIND DIRECTION (DEGREES)	220.586	24
4--TEMPERATURE (CENTIGRADE)	20.368	24
5--RELATIVE HUMIDITY (PERCENT)	78.067	24
6--OZONE (PPM)	0.026	24
7--NITRIC OXIDE (PPM)	0.001	24
8--NITROGEN DIOXIDE (PPM)	0.004	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.444	24
11--NON-METHANE HYDROCARBON (PPMC)	0.340	24
12--CARBON MONOXIDE (PPM)	0.141	24
13--ETHANE (PPMC)	0.002	24
14--ETHYLENE (PPMC)	0.003	24
15--PROPANE (PPMC)	0.007	24
16--ACETYLENE (PPMC)	0.003	24
19--FLUOROCARBON-11 (PPT)	94.	24
20--CARBON TETRACHLORIDE (PPT)	94.	24

TABLE 36b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 17, 1975											
	1	2	3	4	5	6	7	8	9	10	[illegible]	[illegible]
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.050	0.175	0.475	1.525	[illegible]	[illegible]
2--WIND SPEED (MPH)	0.800	1.000	1.200	1.600	2.100	1.400	2.400	2.200	2.900	2.100	[illegible]	1.600
3--WIND DIRECTION (DEGREES)	236.	246.	10.	1.	331.	42.	334.	338.	333.	341.	326.	231.
4--TEMPERATURE (CENTIGRADE)	18.	18.	18.	18.	18.	18.	18.	19.	19.	21.	22.	23.
5--RELATIVE HUMIDITY (PERCENT)	82.	88.	90.	90.	89.	90.	89.	87.	84.	74.	71.	66.
6--OZONE (PPM)	0.026	0.026	0.027	0.023	0.019	0.016	0.011	0.016	0.021	0.029	0.030	0.035
7--NITRIC OXIDE (PPM)	0.001	.000	.000	.000	.000	.000	0.002	0.001	0.001	0.001	[illegible]	.000
8--NITROGEN DIOXIDE (PPM)	0.005	0.005	0.003	0.002	0.002	0.002	0.001	0.002	0.002	0.002	0.002	0.001
9--NITROGEN OXIDES (PPM)	0.006	0.005	0.003	0.002	0.002	0.002	0.003	0.003	0.004	0.003	[illegible]	0.001
10--METHANE (PPMC)	1.414	1.566	1.491	1.425	1.383	1.400	1.410	1.438	1.396	1.3[illegible]	[illegible]	1.395
11--NON-METHANE HYDROCARBON (PPMC)	0.268	0.303	0.390	0.328	0.274	0.333	0.270	0.264	0.340	0.33[illegible]	[illegible]	0.353
12--CARBON MONOXIDE (PPM)	0.162	0.138	0.150	0.112	0.100	0.138	0.137	0.138	0.162	0.12[illegible]	[illegible]	0.075
13--ETHANE (PPMC)	0.001	0.001	0.002	0.002	0.002	0.001	0.001	0.003	0.002	0.002	[illegible]	0.001
14--ETHYLENE (PPMC)	0.003	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.005	[illegible]	0.00[illegible]
15--PROPANE (PPMC)	.000	.000	0.005	0.015	0.014	0.004	0.013	0.022	0.044	0.005	[illegible]	0.00[illegible]
16--ACETYLENE (PPMC)	0.004	0.002	0.003	0.002	0.001	0.002	0.002	0.003	0.003	0.006	.002	0.00[illegible]
19--FLUOROCARBON-11 (PPT)	100.	96.	88.	89.	93.	87.	88.	93.	91.	88.	86.	85.
20--CARBON TETRACHLORIDE (PPT)	120.	95.	85.	90.	95.	85.	98.	70.	95.	105.	100.	10[illegible].

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.775	1.350	0.875	1.200	1.250	0.800	0.300	0.150	0.075	.000	.000	.000
2--WIND SPEED (MPH)	1.700	1.700	2.000	1.200	1.600	1.400	1.500	0.900	0.800	1.800	1.100	1.950
3--WIND DIRECTION (DEGREES)	9.	259.	244.	279.	257.	164.	178.	212.	279.	195.	214.	237.
4--TEMPERATURE (CENTIGRADE)	23.	22.	22.	22.	22.	22.	21.	21.	21.	20.	20.	20.
5--RELATIVE HUMIDITY (PERCENT)	64.	65.	67.	67.	67.	69.	72.	75.	80.	82.	83.	81.
6--OZONE (PPM)	0.039	0.041	0.040	0.041	0.042	0.038	0.035	0.027	0.011	0.002	0.005	0.019
7--NITRIC OXIDE (PPM)	.000	0.000	0.000	0.002	0.001	0.001	0.002	0.002	0.004	0.002	0.003	0.001
8--NITROGEN DIOXIDE (PPM)	0.001	0.002	0.003	0.003	0.003	0.004	0.005	0.006	0.008	0.010	0.010	0.004
9--NITROGEN OXIDES (PPM)	0.001	0.002	0.003	0.005	0.004	0.005	0.007	0.008	0.012	0.012	0.012	0.005
10--METHANE (PPMC)	1.385	1.400	1.400	1.355	1.361	1.335	1.431	1.404	1.426	1.806	1.885	1.395
11--NON-METHANE HYDROCARBON (PPMC)	0.340	0.296	0.358	0.378	0.340	0.415	0.364	0.350	0.360	0.519	0.381	0.311
12--CARBON MONOXIDE (PPM)	0.050	0.063	0.087	0.075	0.062	0.087	0.325	0.125	0.250	0.262	0.275	0.150
13--ETHANE (PPMC)	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.002	0.002	0.002	0.002	0.001
14--ETHYLENE (PPMC)	0.001	0.001	0.003	0.002	0.002	0.005	0.002	0.004	0.008	0.005	0.006	0.006
15--PROPANE (PPMC)	.000	0.003	.000	.000	0.002	0.005	.000	0.004	0.008	0.006	0.002	0.006
16--ACETYLENE (PPMC)	0.002	0.002	0.005	0.002	0.001	0.003	0.003	0.003	0.007	0.005	0.004	0.004
19--FLUOROCARBON-11 (PPT)	86.	87.	92.	85.	86.	84.	88.	93.	96.	153.	128.	103.
20--CARBON TETRACHLORIDE (PPT)	105.	100.	86.	68.	105.	85.	83.	95.	90.	101.	75.	115.

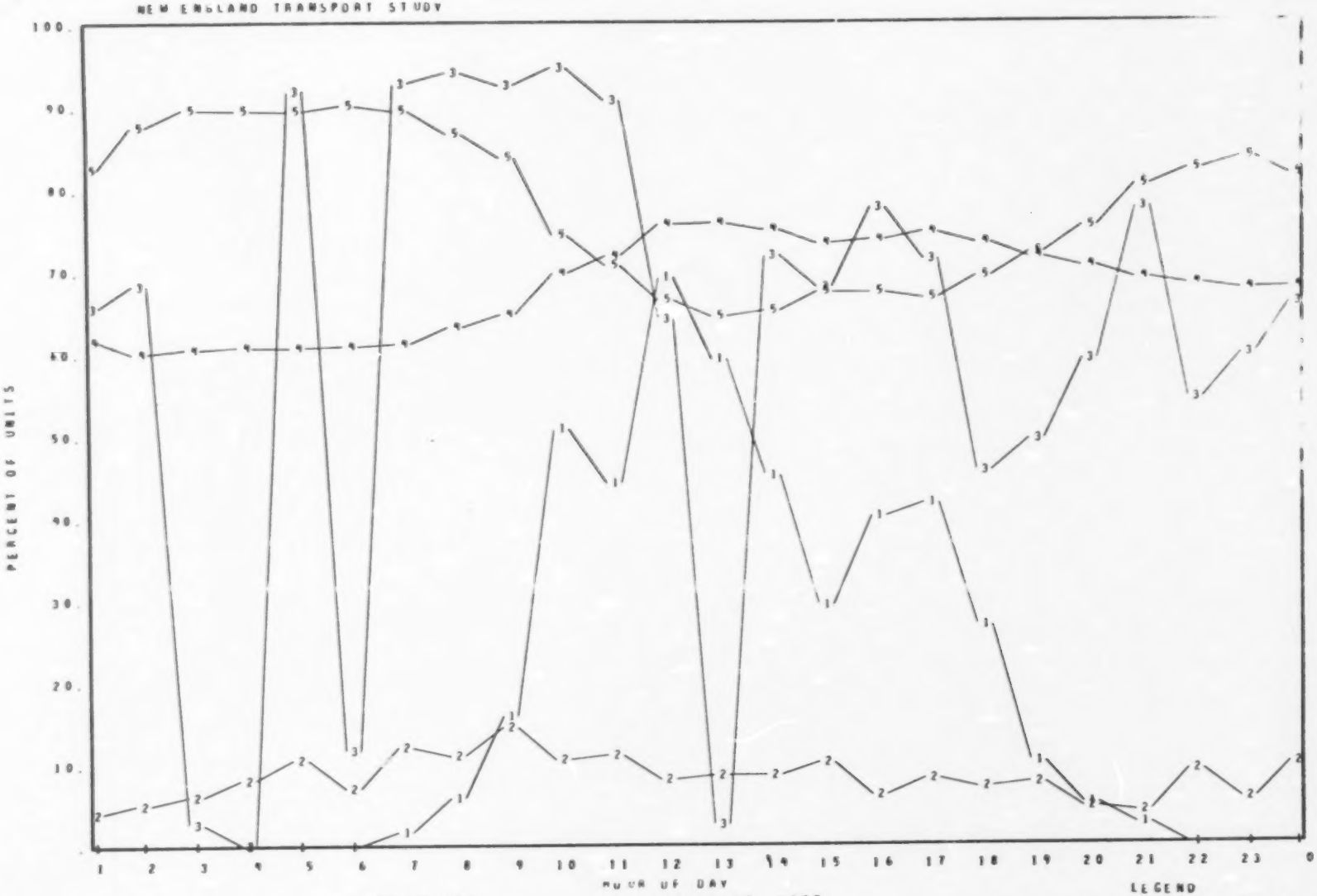

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 17, 1975
LEGEND
1--GLOBAL IRRADIANCE 3.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 40a.

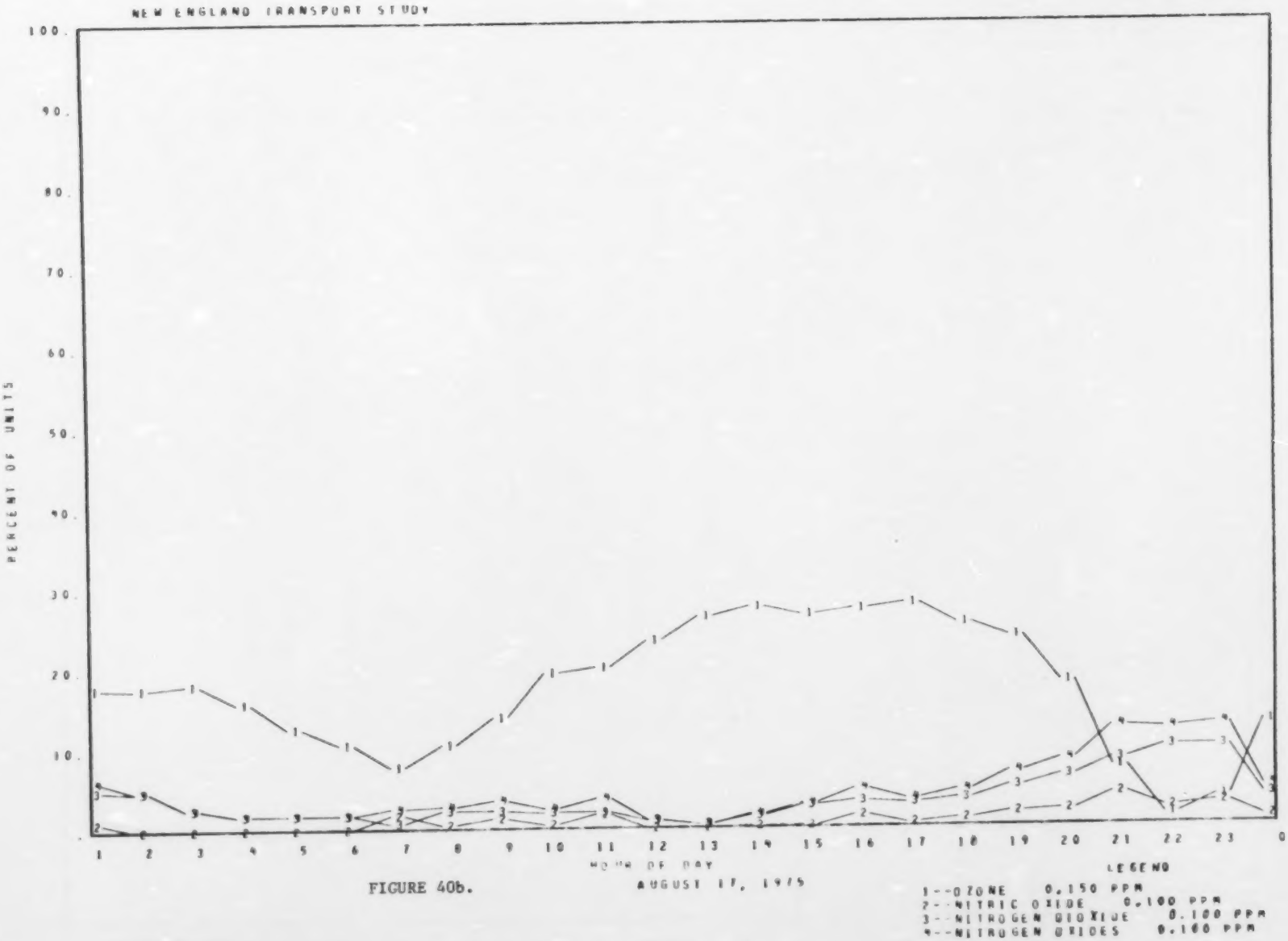
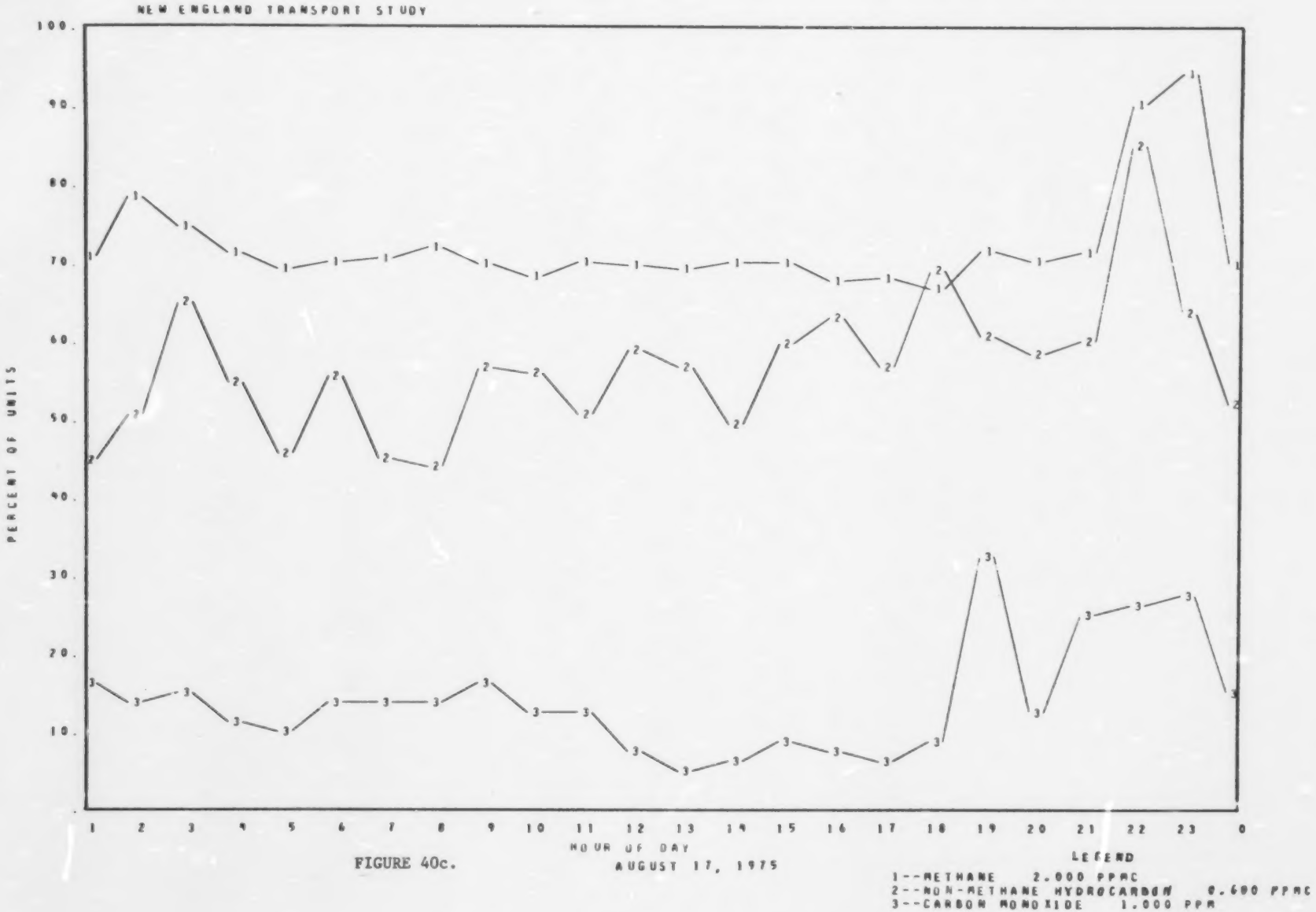

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 17, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 40b.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 17, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 0.690 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 40c.

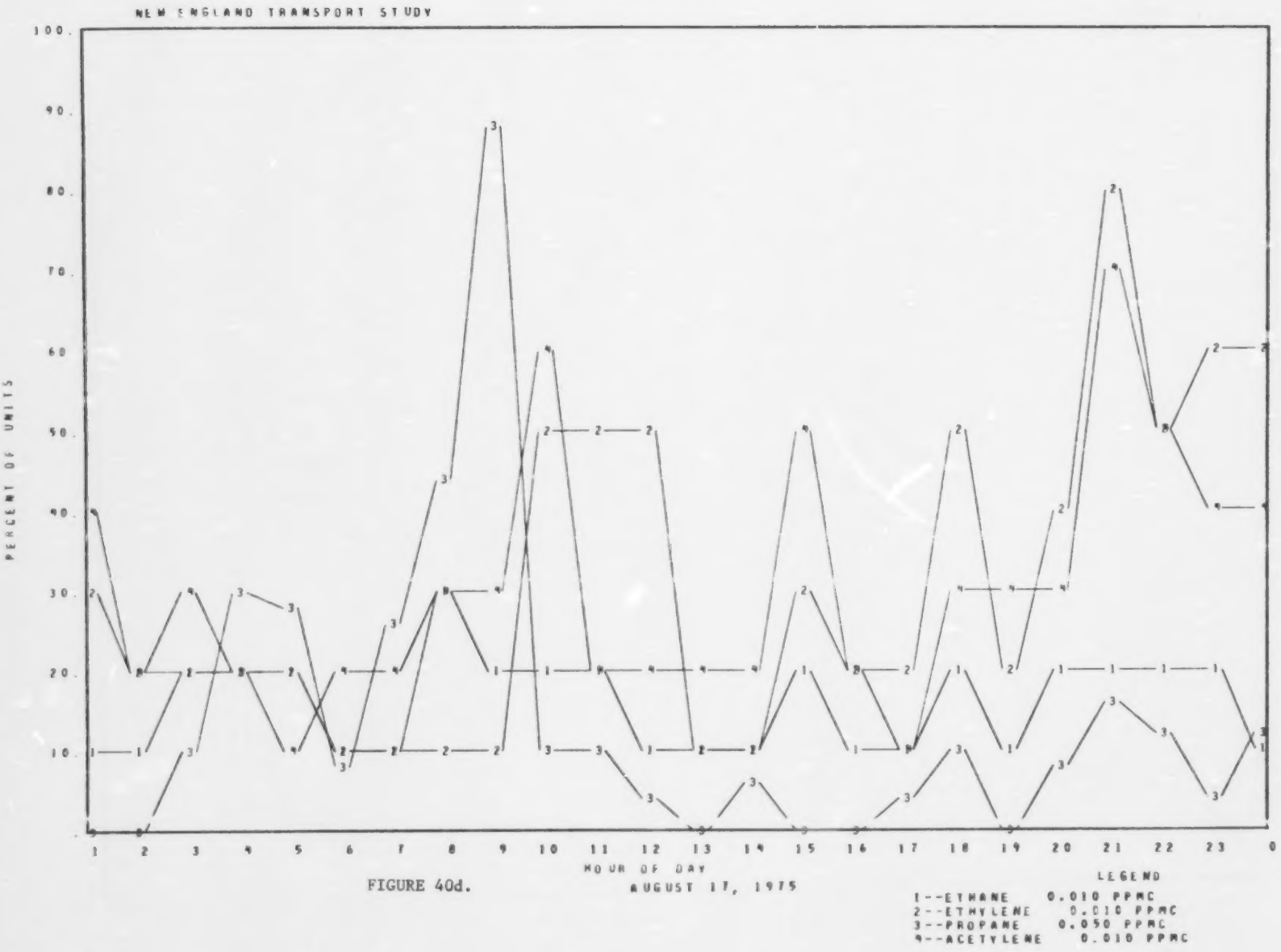

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 17, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.050 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 40d.

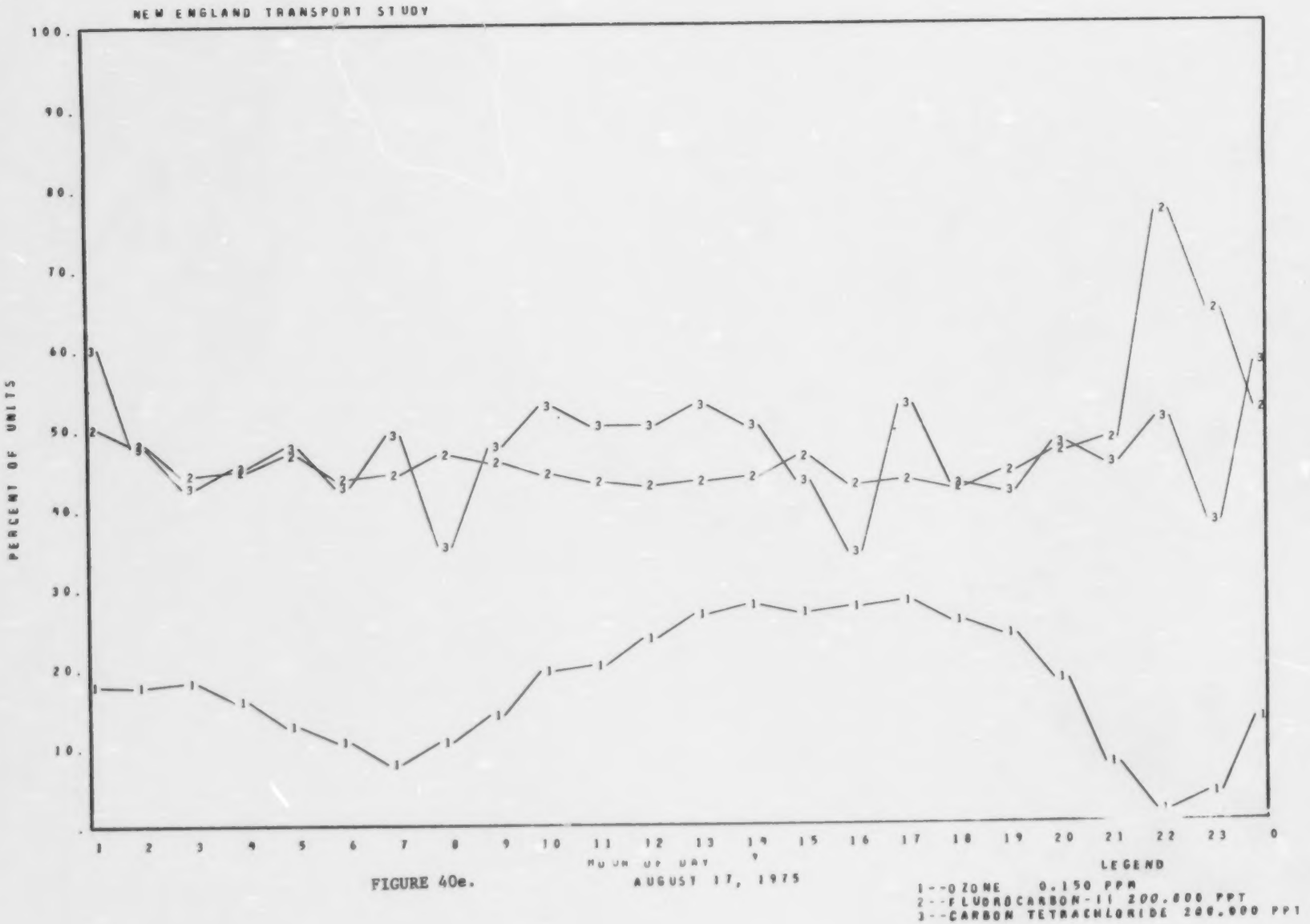
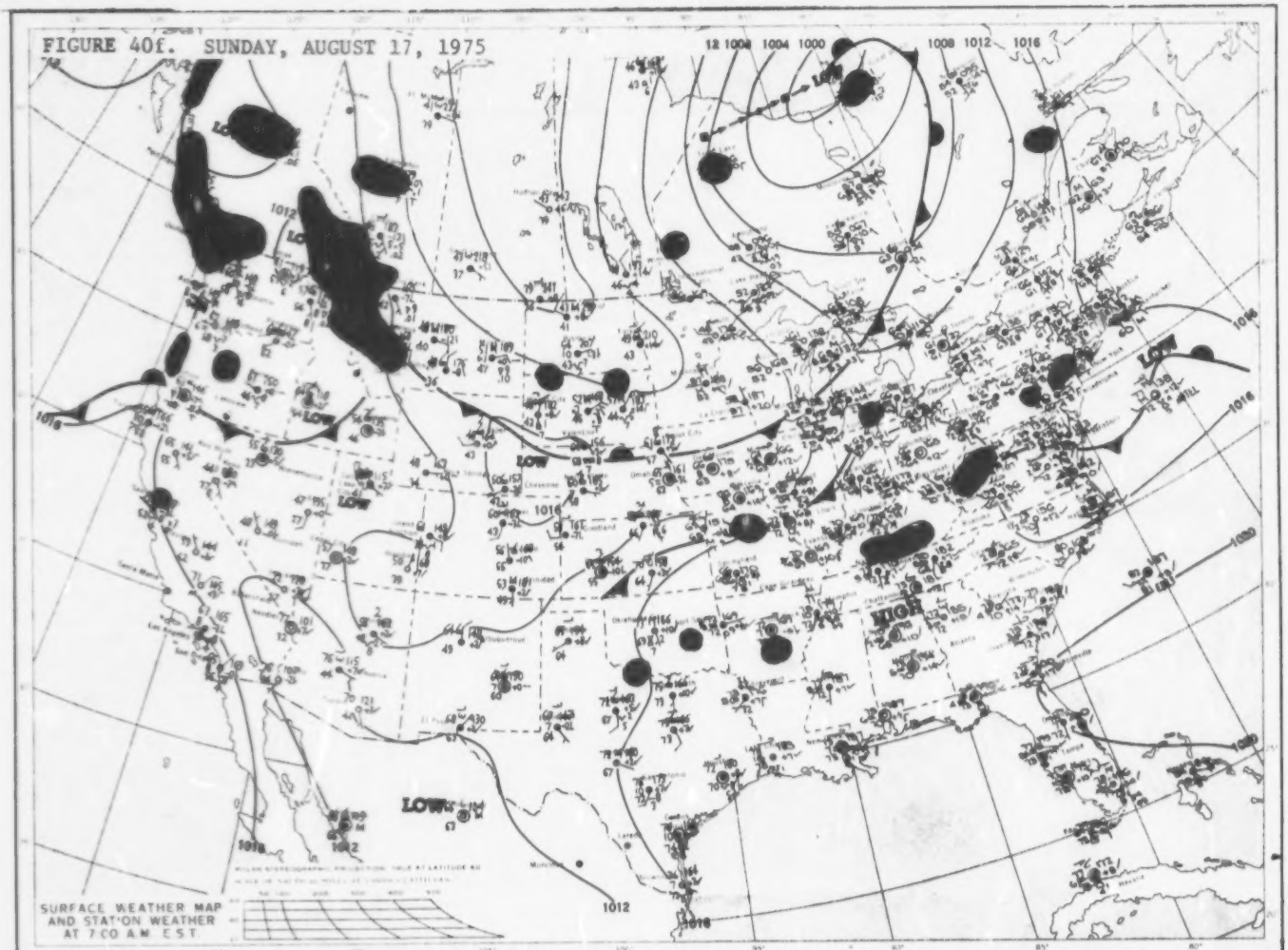

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 17, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 40e.

FIGURE 40f. SUNDAY, AUGUST 17, 1975



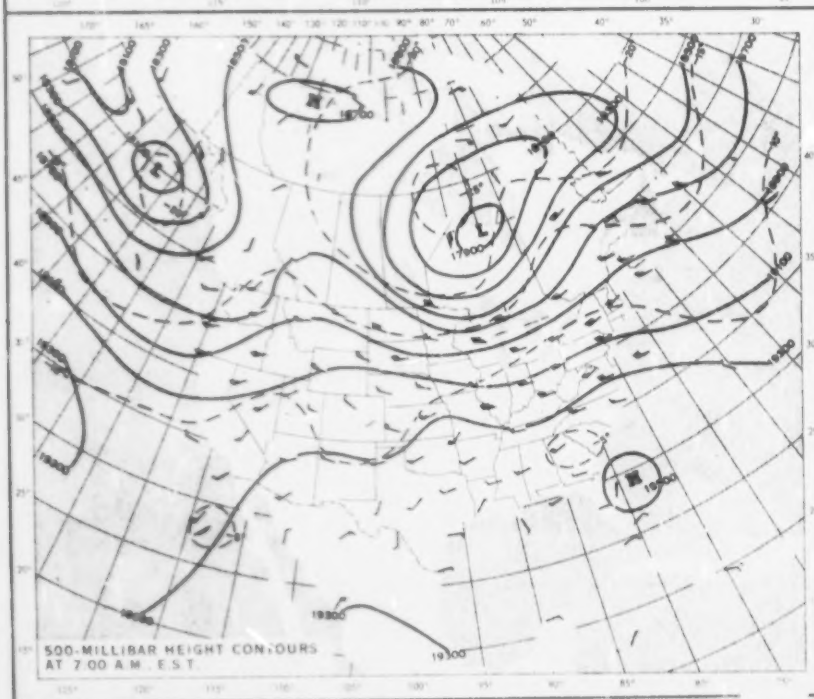


TABLE 37a. AUGUST 18, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.095	24
2--WIND SPEED (MPH)	3.523	24
3--WIND DIRECTION (DEGREES)	258.364	24
4--TEMPERATURE (CENTIGRADE)	23.998	24
5--RELATIVE HUMIDITY (PERCENT)	56.778	24
6--OZONE (PPM)	0.043	24
7--NITRIC OXIDE (PPM)	0.002	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.490	24
11--NON-METHANE HYDROCARBON (PPMC)	0.386	24
12--CARBON MONOXIDE (PPM)	0.145	24
13--ETHANE (PPMC)	0.002	24
14--ETHYLENE (PPMC)	0.004	24
15--PROPANE (PPMC)	0.004	24
16--ACETYLENE (PPMC)	0.003	23
19--FLUOROCARBON-11 (PPT)	106.	24
20--CARBON TETRACHLORIDE (PPT)	90.	24

TABLE 37b.

HOUR AVERAGES FOR AUGUST 18, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.200	1.300	3.025	4.250	4.400	.000
2--WIND SPEED (MPH)	1.350	1.550	1.750	1.800	1.900	1.900	0.900	1.200	2.000	3.500	5.500	4.900
3--WIND DIRECTION (DEGREES)	253.	193.	177.	179.	172.	184.	298.	70.	260.	258.	314.	321.
4--TEMPERATURE (CENTIGRADE)	20.	20.	20.	20.	20.	20.	19.	22.	26.	28.	2[illegible].	29.
5--RELATIVE HUMIDITY (PERCENT)	79.	80.	82.	82.	83.	84.	86.	76.	62.	53.	48.	44.
6--OZONE (PPM)	0.035	0.034	0.031	0.032	0.030	0.033	0.014	0.009	0.035	0.051	0.061	0.063
7--NITRIC OXIDE (PPM)	0.000	.000	.000	.000	.000	.000	0.007	0.006	0.001	0.002	[illegible]	0.003
8--NITROGEN DIOXIDE (PPM)	0.001	0.000	.000	0.000	.000	0.000	0.004	0.008	0.006	0.004	0.	0.005
9--NITROGEN OXIDES (PPM)	0.001	0.000	.000	0.000	.000	0.000	0.011	0.014	0.006	0.006		0.00
10--METHANE (PPMC)	1.369	1.433	1.928	2.058	2.194	1.471	1.858	1.475	1.490	1.483	[illegible]	1.358
11--NON-METHANE HYDROCARBON (PPMC)	0.295	0.297	0.401	0.337	0.407	0.328	0.653	0.451	0.468	0.394	[illegible]	0.42[illegible]
12--CARBON MONOXIDE (PPM)	0.050	0.050	0.062	0.100	0.125	0.150	0.188	0.412	0.337	0.187		0.18
13--ETHANE (PPMC)	0.002	0.002	0.001	0.003	0.002	0.003	0.003	0.002	0.002	0.00[illegible]	03	0.00
14--ETHYLENE (PPMC)	0.005	0.003	0.006	0.003	0.002	0.001	0.005	0.009	0.006	0.00	06	0.00[illegible]
15--PROPANE (PPMC)	.000	.000	.000	0.004	.000	0.006	0.030	.000	0.001	0.00	04	.00[illegible]
16--ACETYLENE (PPMC)	0.003	0.002	0.002	0.003	0.002	0.003	0.005	0.007	0.005	0.005	004	0.006
19--FLUOROCARBON-11 (PPT)	99.	97.	141.	151.	120.	106.	116.	118.	131.	113.	103.	98.
20--CARBON TETRACHLORIDE (PPT)	85.	90.	110.	90.	98.	80.	95.	68.	75.	75.	80.	85.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.750	6.150	6.300	5.000	3.575	2.700	1.250	0.250	0.100	0.025	.000	.000
2--WIND SPEED (MPH)	5.200	4.700	4.700	4.300	4.400	4.800	5.000	4.500	4.700	3.200	4.000	6.900
3--WIND DIRECTION (DEGREES)	294.	283.	264.	266.	288.	294.	300.	298.	313.	333.	291.	299.
4--TEMPERATURE (CENTIGRADE)	29.	30.	30.	30.	30.	29.	27.	23.	21.	19.	19.	19.
5--RELATIVE HUMIDITY (PERCENT)	43.	39.	38.	38.	38.	37.	37.	42.	47.	53.	50.	42.
6--OZONE (PPM)	0.060	0.058	0.059	0.059	0.060	0.053	0.047	0.051	0.045	0.038	0.040	0.041
7--NITRIC OXIDE (PPM)	0.004	0.002	0.004	0.003	0.005	0.002	0.001	0.000	0.002	0.001	0.000	.000
8--NITROGEN DIOXIDE (PPM)	0.003	0.004	0.002	0.006	0.007	0.005	0.004	0.004	0.005	0.005	0.002	0.000
9--NITROGEN OXIDES (PPM)	0.007	0.007	0.006	0.009	0.012	0.007	0.005	0.005	0.007	0.006	0.002	0.000
10--METHANE (PPMC)	1.317	1.339	1.358	1.355	1.350	1.350	1.350	1.350	1.343	1.338	1.390	1.411
11--NON-METHANE HYDROCARBON (PPMC)	0.528	0.444	0.455	0.475	0.458	0.341	0.273	0.266	0.270	0.343	0.368	0.185
12--CARBON MONOXIDE (PPM)	0.175	0.137	0.137	0.333	0.117	0.187	0.083	0.062	0.050	0.075	0.075	0.013
13--ETHANE (PPMC)	0.002	0.002	0.001	0.002	0.002	0.002	0.001	.000	0.002	0.001	0.001	0.001
14--ETHYLENE (PPMC)	0.001	.000	0.001	0.001	0.006	0.001	0.001	0.002	0.014	0.003	0.001	.000
15--PROPANE (PPMC)	0.001	.000	0.004	0.007	0.002	0.021	0.006	.000	.000	0.004	0.011	.000
16--ACETYLENE (PPMC)	0.002	0.001	0.001	0.001	0.003	0.001	0.001	0.002	0.007	0.002	-0.001	0.001
19--FLUOROCARBON-11 (PPT)	105.	103.	97.	101.	106.	89.	89.	88.	96.	84.	98.	98.
20--CARBON TETRACHLORIDE (PPT)	90.	90.	90.	105.	100.	80.	105.	105.	85.	60.	105.	105.

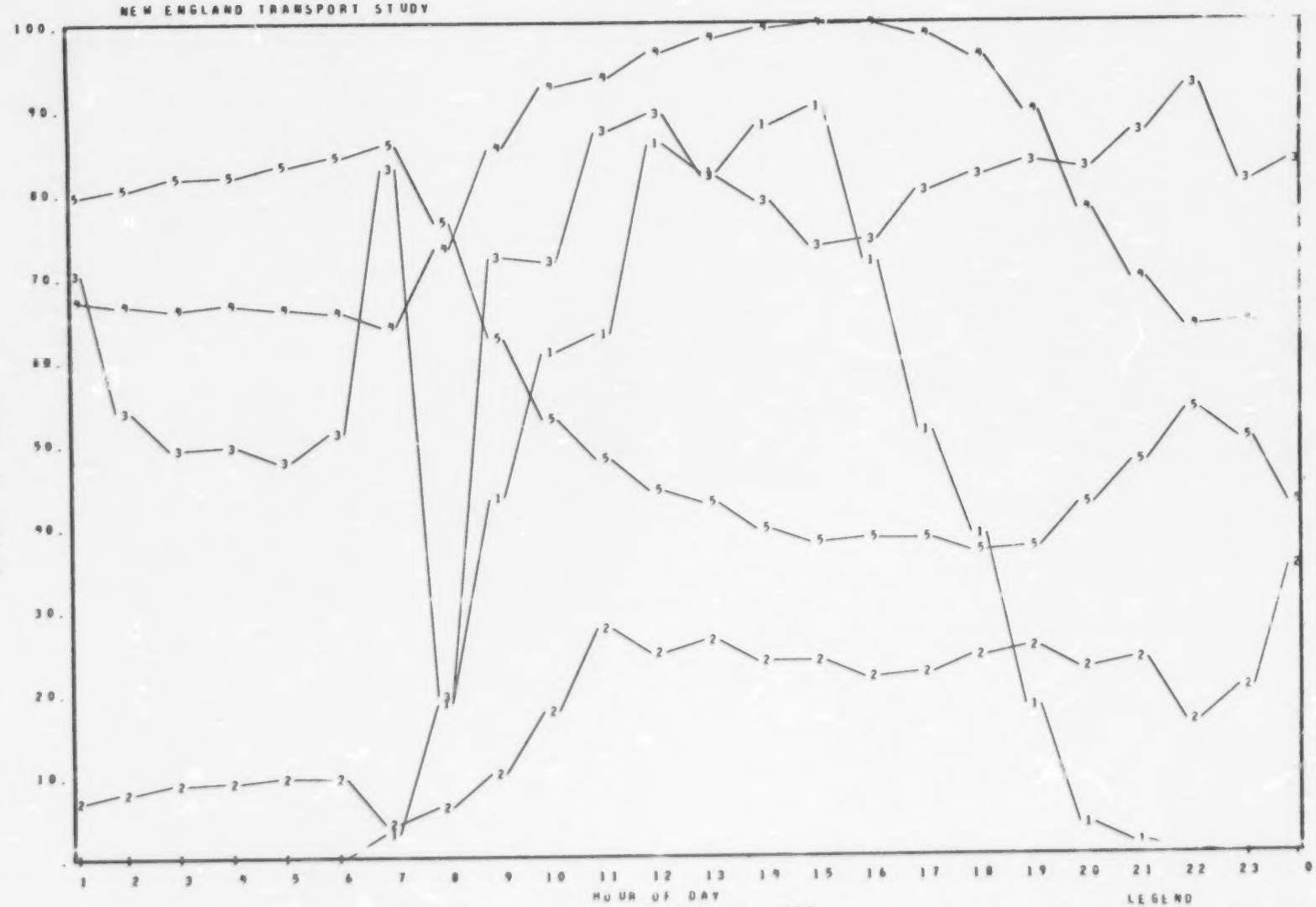
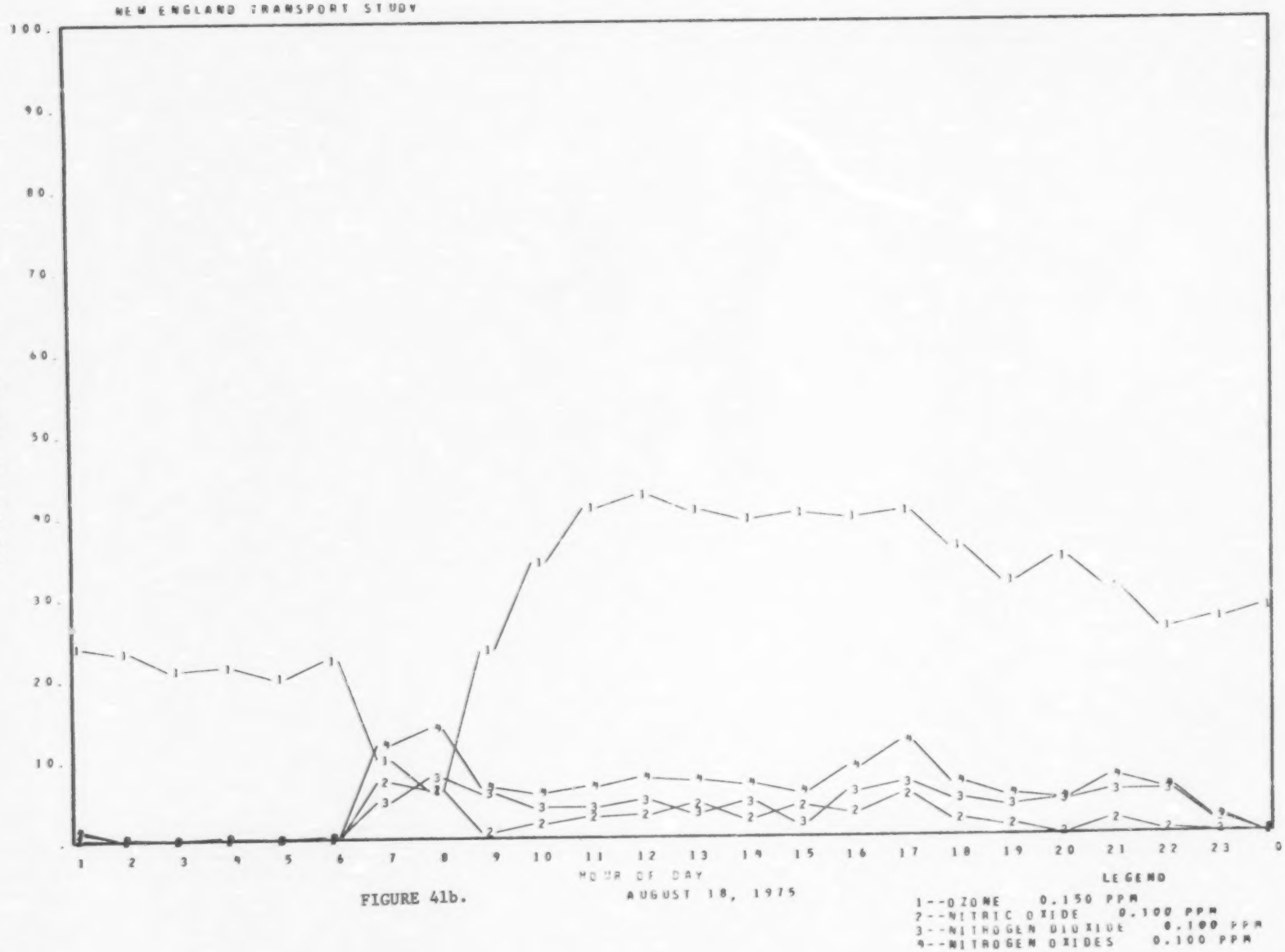

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 18, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 41a.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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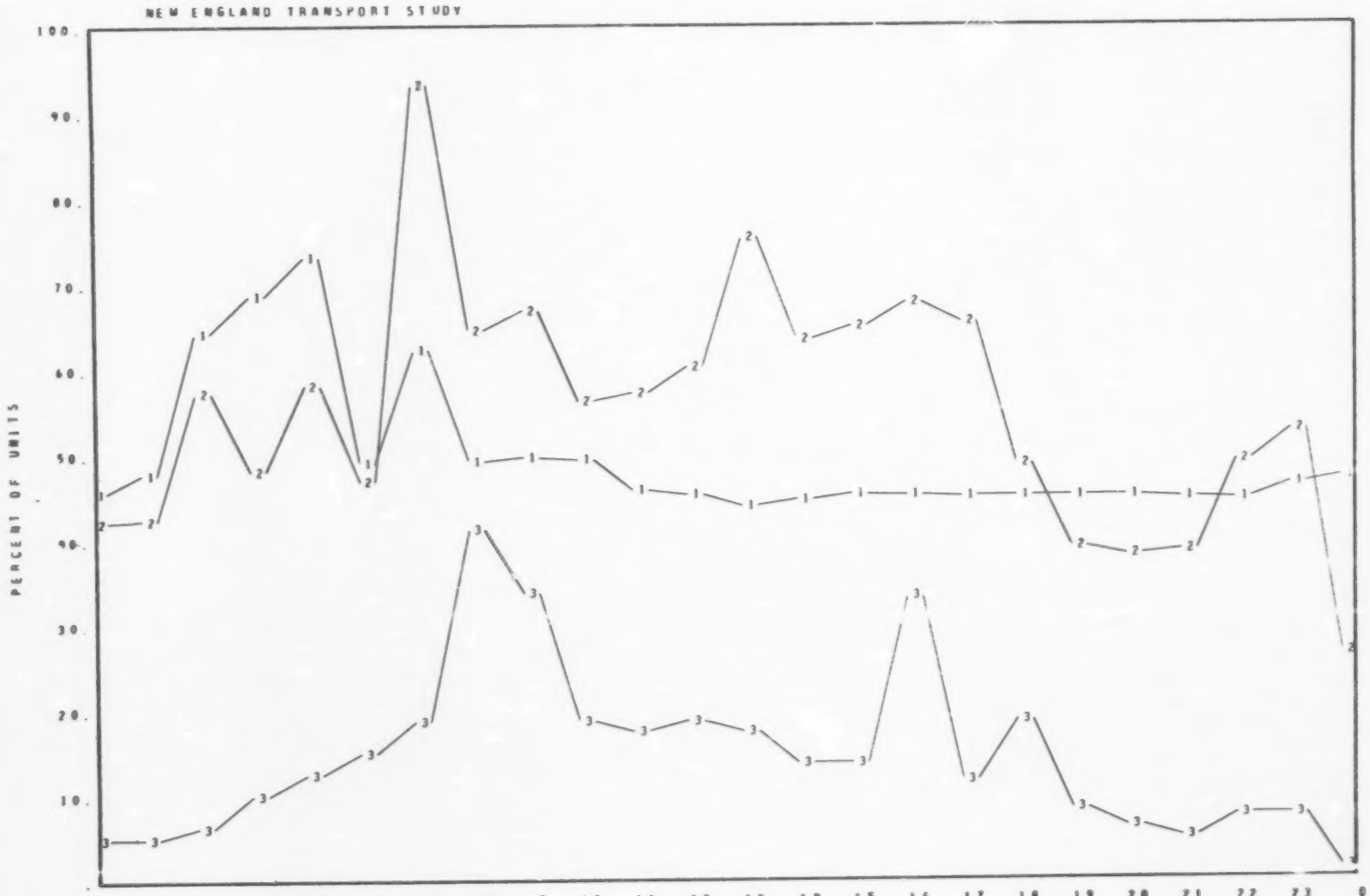
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 18, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 41b.


NEW ENGLAND TRANSPORT STUDY
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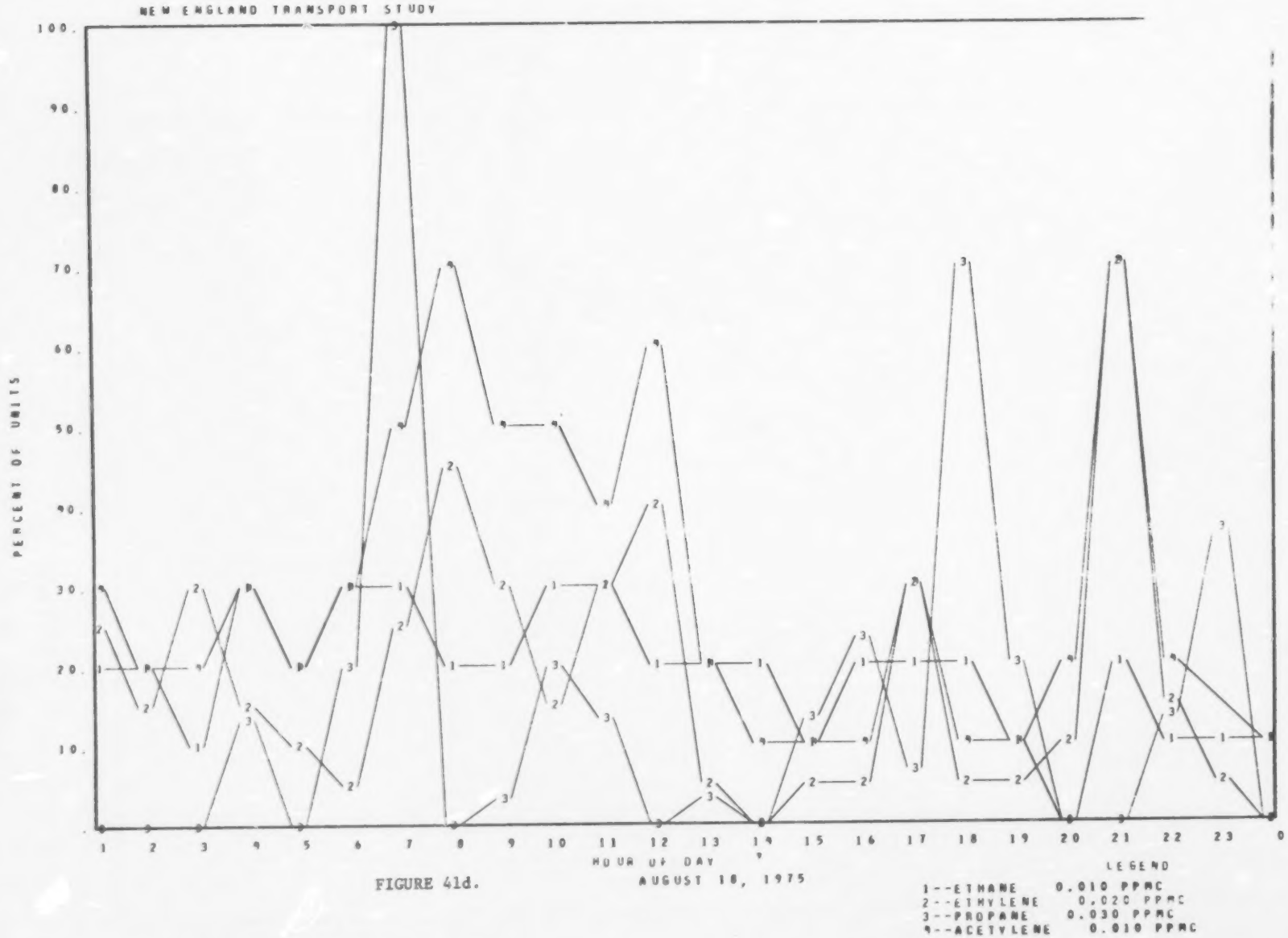
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 18, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.700 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 41c.


NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
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10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 18, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.020 PPMC
3--PROPANE 0.030 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 41d.

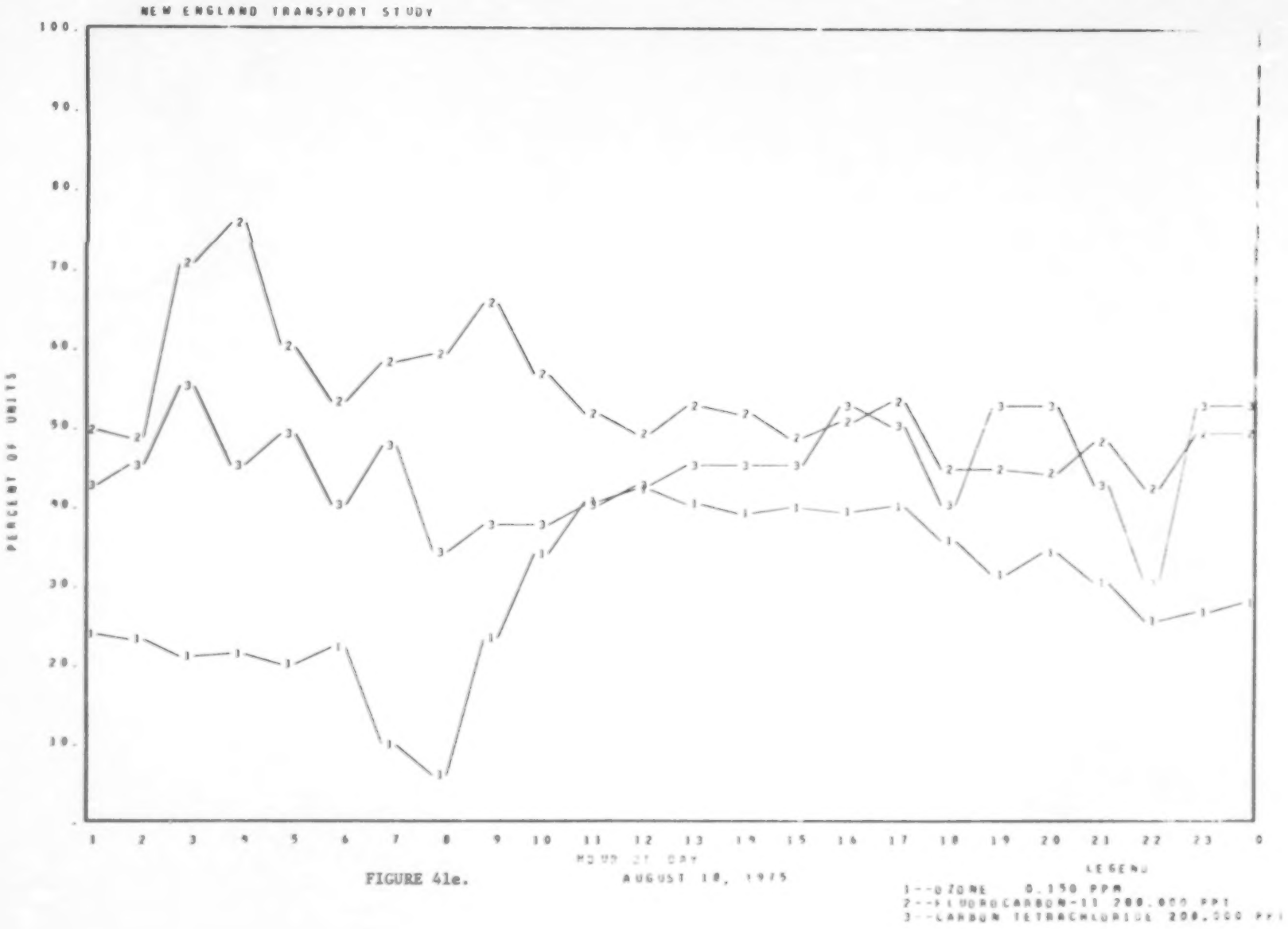
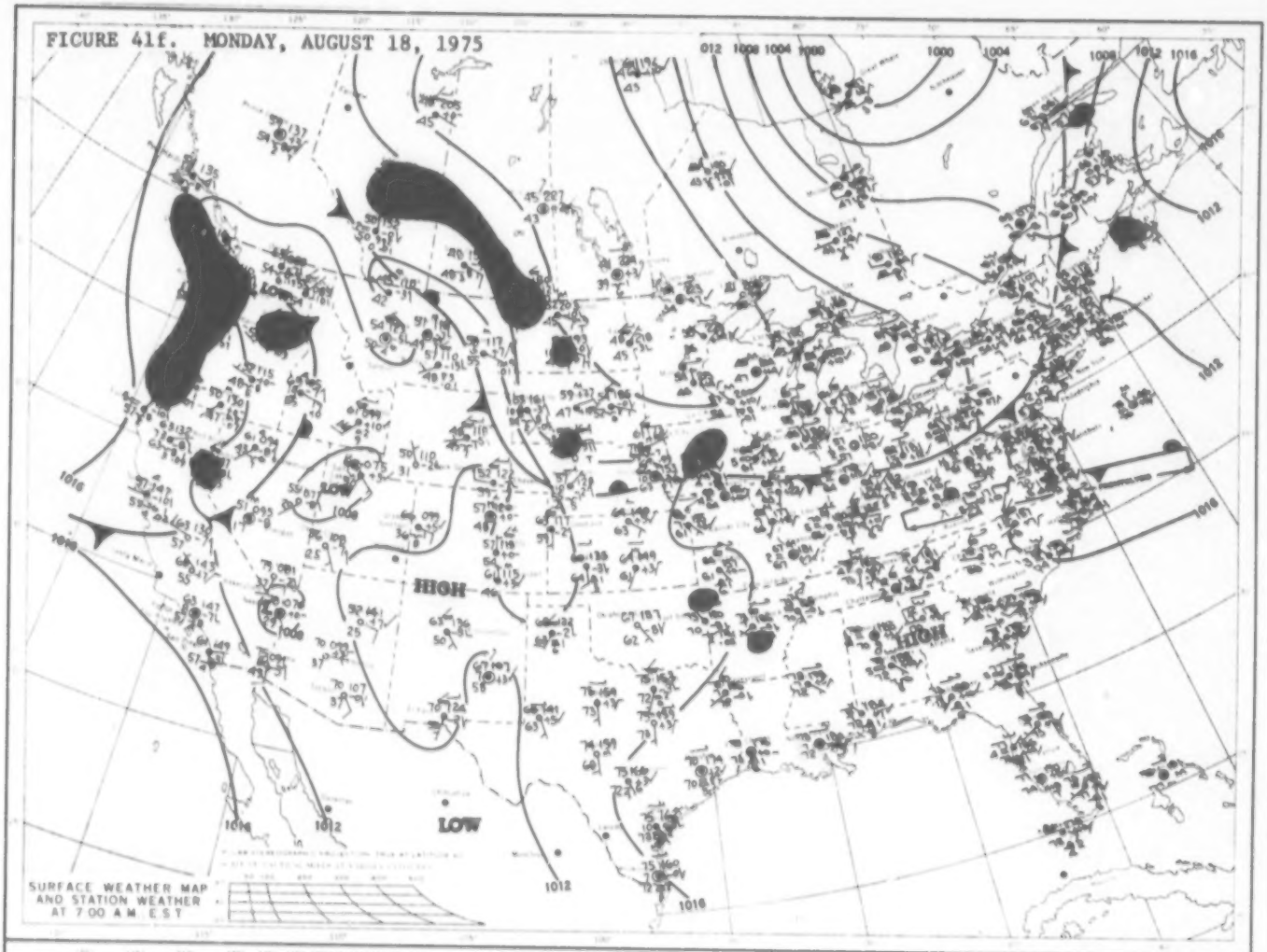
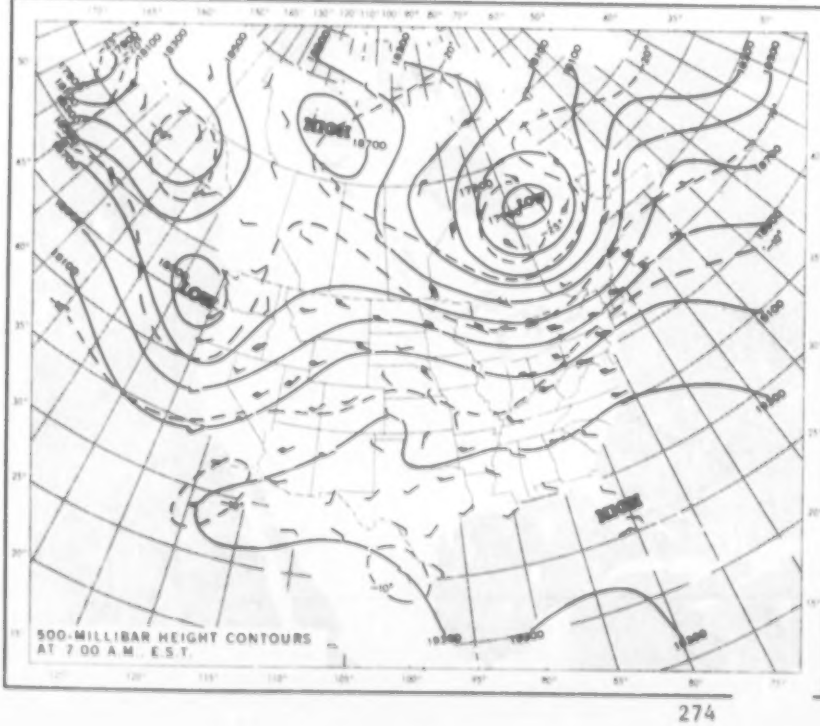
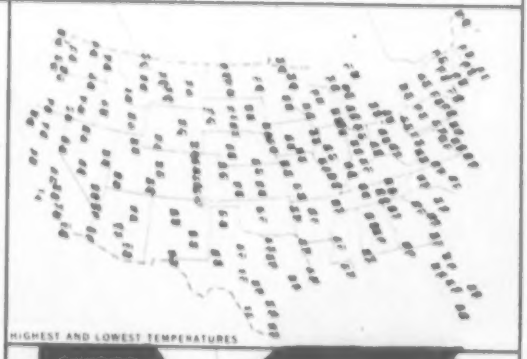

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 18, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200,000 PPT
3--CARBON TETRACHLORIDE 200,000 PPT

FIGURE 41e.

FICURE 41f. MONDAY, AUGUST 18, 1975







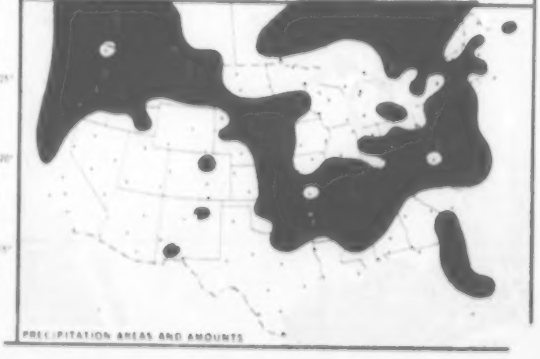


TABLE 38a. AUGUST 19, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.436	24
2--WIND SPEED (MPH)	3.500	24
3--WIND DIRECTION (DEGREES)	276.097	24
4--TEMPERATURE (CENTIGRADE)	19.849	24
5--RELATIVE HUMIDITY (PERCENT)	48.765	24
6--OZONE (PPM)	0.026	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.003	24
9--NITROGEN OXIDES (PPM)	0.005	24
10--METHANE (PPMC)	1.448	24
11--NON-METHANE HYDROCARBON (PPMC)	0.320	24
12--CARBON MONOXIDE (PPM)	0.086	22
13--ETHANE (PPMC)	0.001	23
14--ETHYLENE (PPMC)	0.002	23
15--PROPANE (PPMC)	0.005	24
16--ACETYLENE (PPMC)	0.002	23
19--FLUOROCARBON-11 (PPT)	93.	24
20--CARBON TETRACHLORIDE (PPT)	79.	23

TABLE 38b.

SUBSTANCE	HOUR AVERAGES FOR AUGUST 19, 1975											
	1	2	3	4	5	6	7	8	9	10	11	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.250	2.025	3.525	4.875	5.075	5.250
2--WIND SPEED (MPH)	5.000	4.400	4.800	6.050	4.950	1.400	1.000	2.900	3.300	3.800	4.800	4.200
3--WIND DIRECTION (DEGREES)	299.	305.	296.	313.	264.	201.	192.	147.	180.	306.	329.	295.
4--TEMPERATURE (CENTIGRADE)	18.	16.	16.	16.	15.	13.	14.	18.	21.	23.	24.	24.
5--RELATIVE HUMIDITY (PERCENT)	44.	50.	52.	51.	53.	65.	69.	56.	43.	35.	32.	29.
6--OZONE (PPM)	0.038	0.035	0.033	0.030	0.027	0.021	0.013	0.012	0.023	0.028	0.032	0.036
7--NITRIC OXIDE (PPM)	.000	.000	.000	.000	.000	.000	.000	0.001	0.002	0.007	0.001	0.002
8--NITROGEN DIOXIDE (PPM)	0.000	.000	.000	.000	.000	0.000	0.001	0.003	0.001	0.000	0.003	0.001
9--NITROGEN OXIDES (PPM)	0.000	.000	.000	.000	.000	0.000	0.001	0.004	0.002	0.008	0.004	0.003
10--METHANE (PPMC)	1.400	1.400	1.400	1.400	1.450	1.740	1.750	1.500	1.450	1.400	1.400	1.400
11--NON-METHANE HYDROCARBON (PPMC)	0.180	0.181	0.218	0.194	0.155	0.224	0.363	0.228	0.390	0.294	0.[illegible]3	0.224
12--CARBON MONOXIDE (PPM)	0.037	.000	.000	.000	0.025	.000	0.125	0.137	0.075	0.112	0.100	0.037
13--ETHANE (PPMC)	0.001	0.001	.000	.000	0.001	.000	.000	0.001	0.001	0.001	.000	0.001
14--ETHYLENE (PPMC)	0.001	0.001	.000	0.001	0.001	0.001	0.002	0.001	0.002	0.005	.000	.000
15--PROPANE (PPMC)	0.004	.000	.000	.000	.000	.000	.000	.000	0.003	.000	.000	.000
16--ACETYLENE (PPMC)	0.001	0.001	.000	.000	.000	.000	0.001	0.002	0.002	0.005	0.001	0.001
19--FLUOROCARBON-11 (PPT)	89.	97.	94.	86.	94.	93.	96.	100.	88.	84.	78.	82.
20--CARBON TETRACHLORIDE (PPT)	105.	90.	85.	80.	83.	85.	75.	68.	70.	80.	90.	90.

	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.000	7.000	6.450	5.650	4.550	3.200	1.250	0.250	0.100	0.025	.000	.000
2--WIND SPEED (MPH)	4.800	3.300	5.600	6.700	5.300	4.200	2.700	1.300	0.800	0.600	0.700	1.400
3--WIND DIRECTION (DEGREES)	277.	259.	294.	294.	292.	284.	290.	292.	345.	251.	312.	321.
4--TEMPERATURE (CENTIGRADE)	25.	25.	27.	26.	27.	26.	24.	20.	16.	15.	14.	13.
5--RELATIVE HUMIDITY (PERCENT)	27.	27.	27.	27.	26.	29.	35.	53.	74.	85.	89.	91.
6--OZONE (PPM)	0.039	0.039	0.039	0.039	0.036	0.037	0.034	0.020	0.006	.000	.000	.000
7--NITRIC OXIDE (PPM)	0.001	0.001	0.001	0.001	0.004	0.006	0.005	0.007	0.005	0.010	0.011	0.005
8--NITROGEN DIOXIDE (PPM)	0.001	0.002	0.005	0.002	0.004	0.003	0.005	0.006	0.008	0.008	0.007	0.005
9--NITROGEN OXIDES (PPM)	0.001	0.003	0.005	0.003	0.007	0.008	0.010	0.012	0.013	0.018	0.017	0.010
10--METHANE (PPMC)	1.400	1.400	1.400	1.350	1.350	1.350	1.350	1.400	1.400	1.550	1.520	1.600
11--NON-METHANE HYDROCARBON (PPMC)	0.256	0.271	0.253	0.266	0.521	0.303	0.300	0.428	0.788	0.400	0.400	0.571
12--CARBON MONOXIDE (PPM)	-0.031	0.025	0.037	0.013	0.050	0.083	0.100	0.138	0.225	-0.262	0.300	0.225
13--ETHANE (PPMC)	.000	-0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.002
14--ETHYLENE (PPMC)	0.001	-0.002	0.004	.000	.000	0.001	0.003	0.002	0.003	0.005	0.010	0.003
15--PROPANE (PPMC)	.000	.000	.000	.000	0.004	.000	.000	.000	0.007	0.011	0.043	0.058
16--ACETYLENE (PPMC)	.000	-0.001	0.003	.000	0.001	0.001	0.002	0.002	0.002	0.004	0.006	0.003
19--FLUOROCARBON-11 (PPT)	83.	128.	78.	78.	82.	81.	86.	89.	108.	116.	116.	105.
20--CARBON TETRACHLORIDE (PPT)	-75.	60.	70.	80.	75.	75.	95.	53.	75.	90.	80.	68.

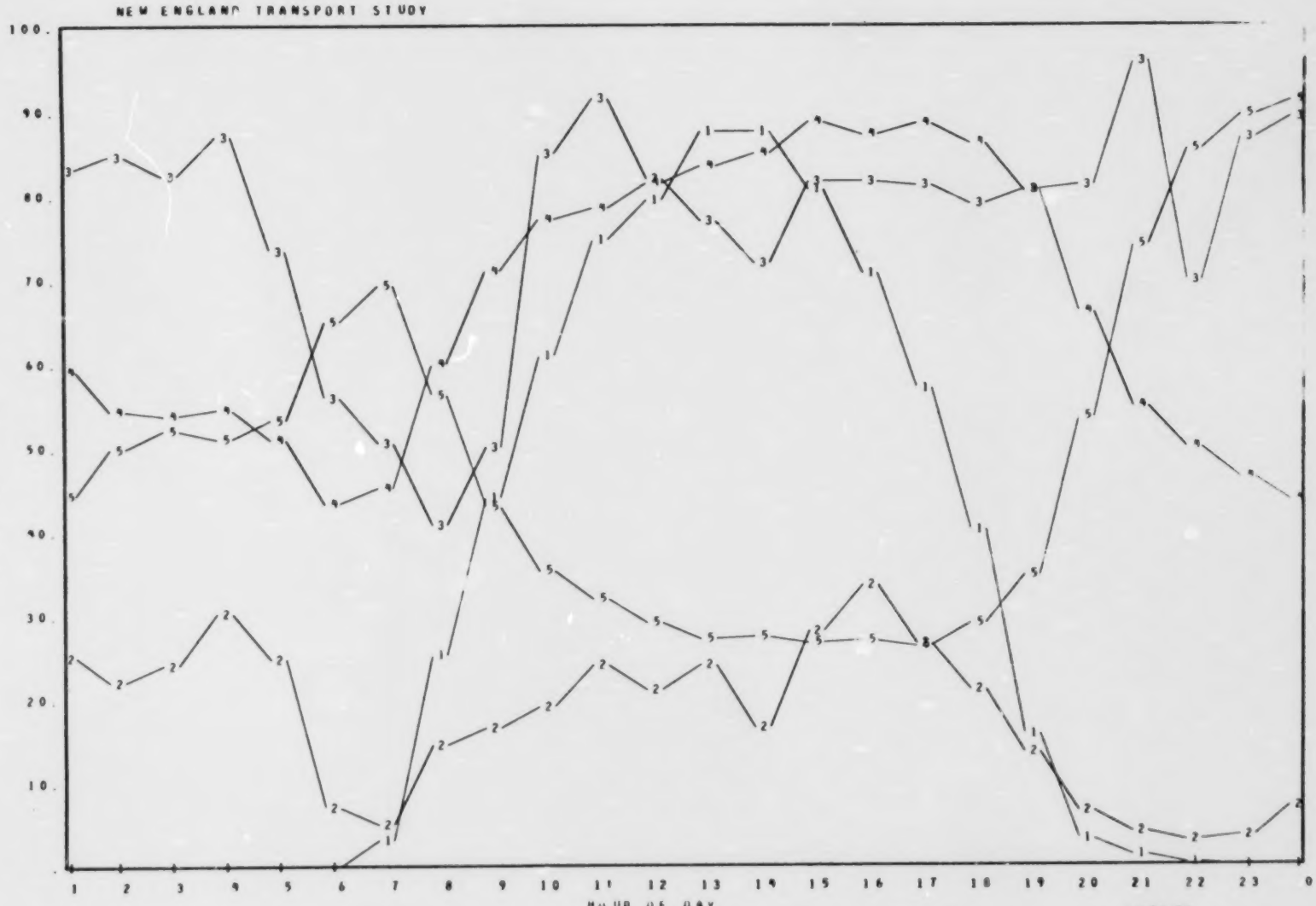

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 19, 1975
LEGEND
1--GLOBAL IRRADIANCE 0.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 42a.

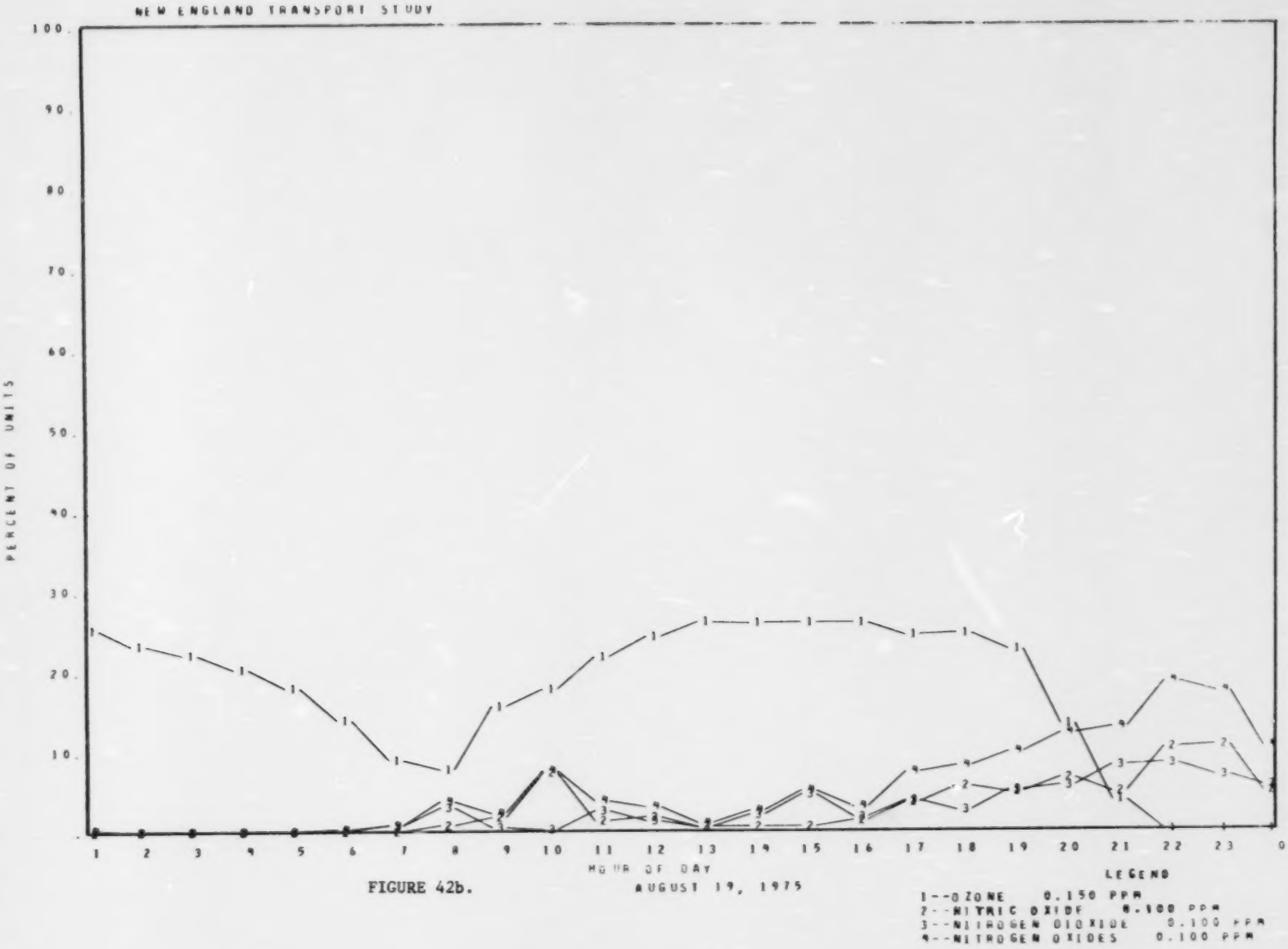

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 19, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 42b.

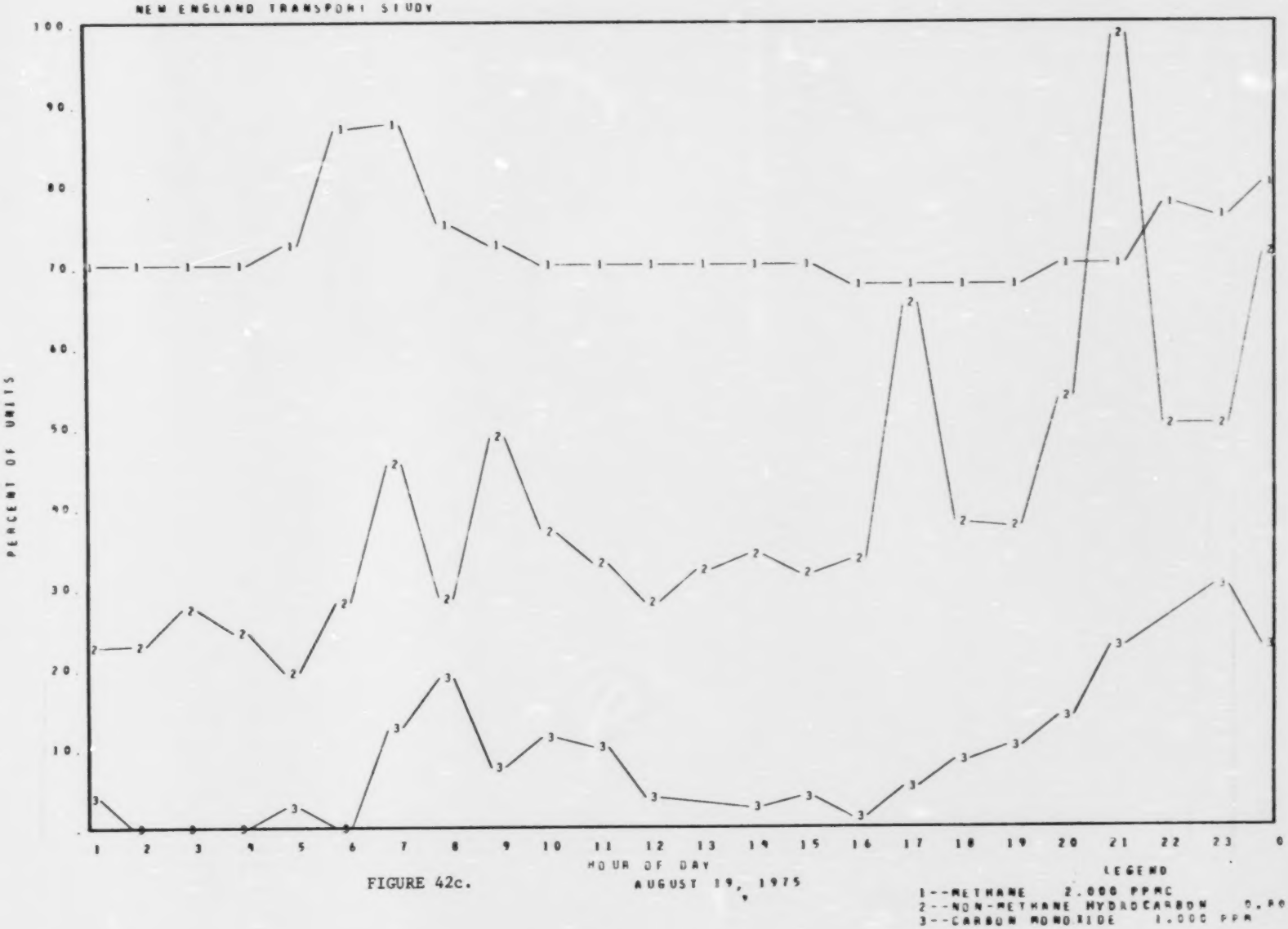

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 19, 1975
LEGEND
1--METHANE 2.000 PPMC
2--NON-METHANE HYDROCARBON 0.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 42c.

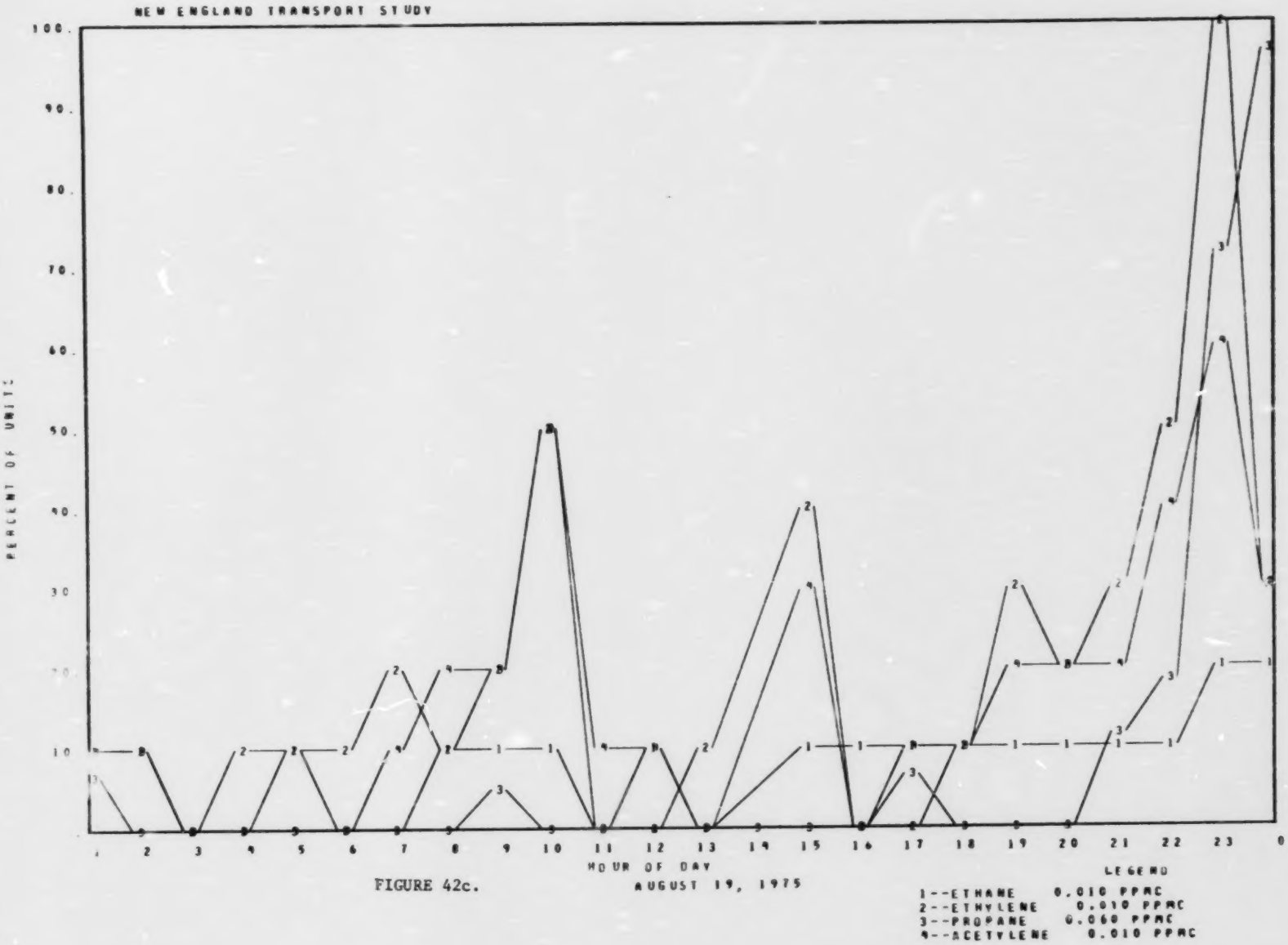

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 19, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.060 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 42c.

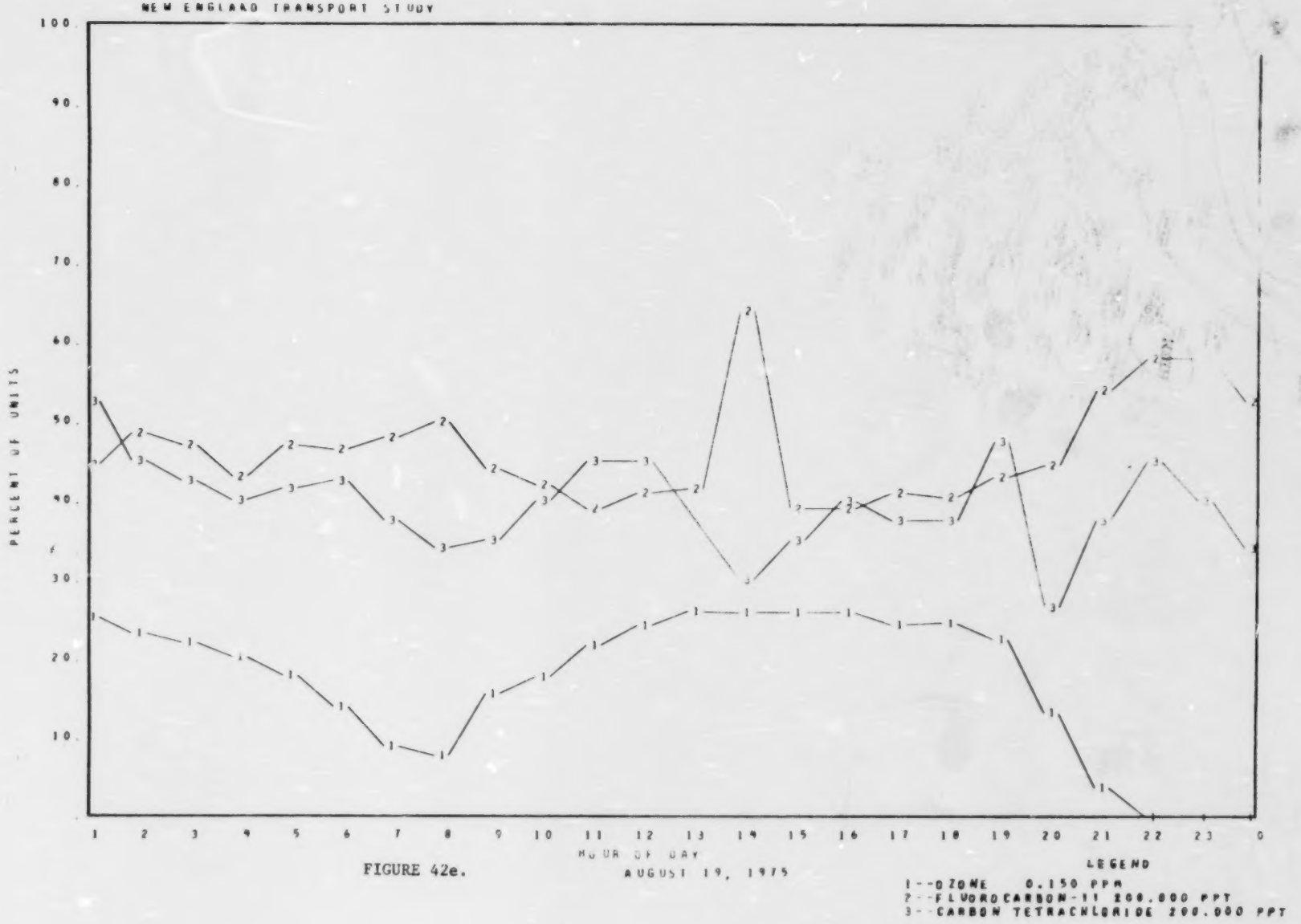

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 19, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 42e.

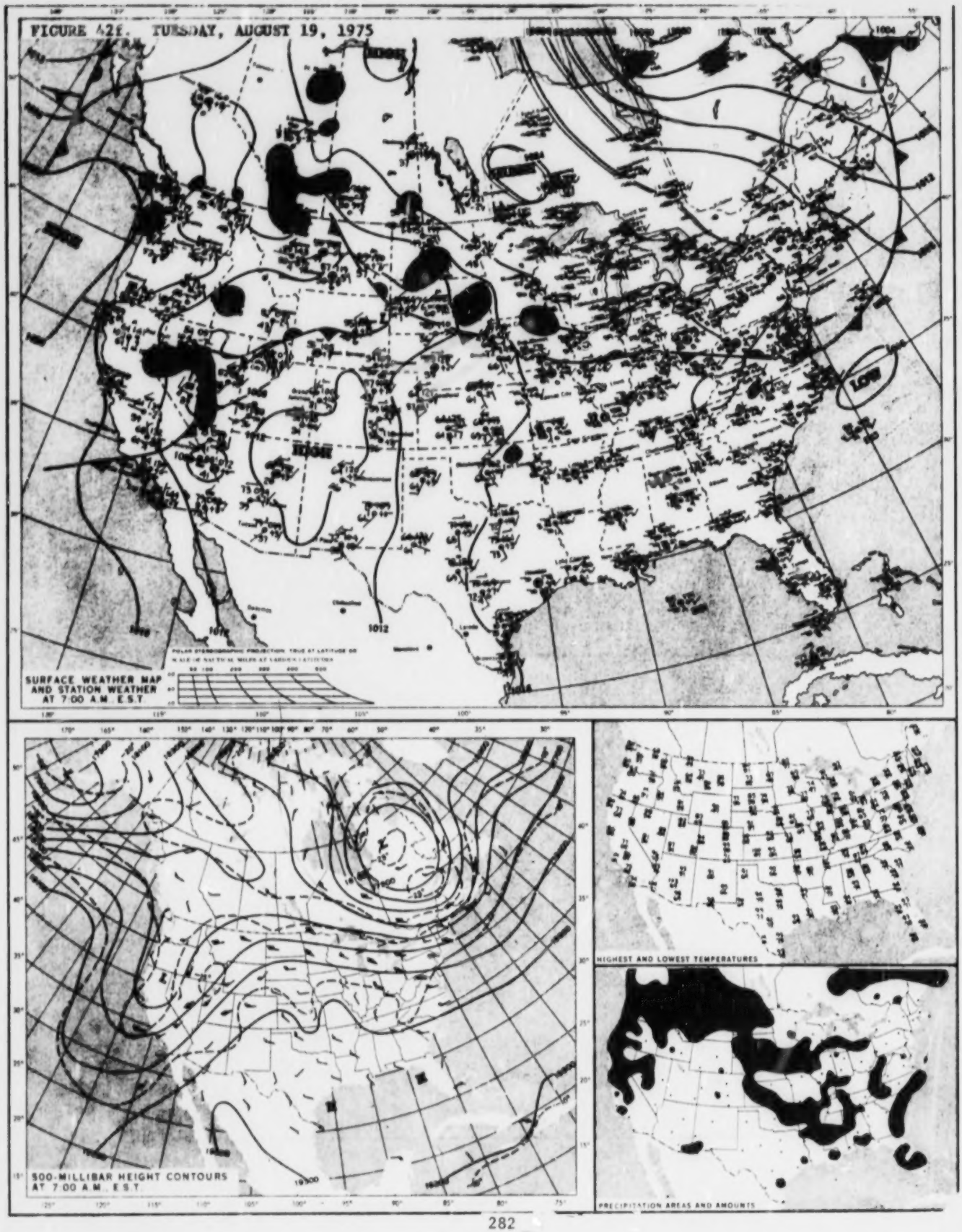


FIGURE 42f. TUESDAY, AUGUST 19, 1975
HIGH
LOW
1012
SURFACE WEATHER MAP AND STATION WEATHER AT 7:00 A.M. E.S.T.
500-MILLIBAR HEIGHT CONTOURS AT 7:00 A.M. E.S.T.
HIGHEST AND LOWEST TEMPERATURES
PRECIPITATION AREAS AND AMOUNTS

TABLE 39a. AUGUST 20, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.308	24
2--WIND SPEED (MPH)	3.242	24
3--WIND DIRECTION (DEGREES)	283.639	24
4--TEMPERATURE (CENTIGRADE)	18.765	24
5--RELATIVE HUMIDITY (PERCENT)	59.536	24
6--OZONE (PPM)	0.020	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.760	24
11--NON-METHANE HYDROCARBON (PPMC)	0.474	24
12--CARBON MONOXIDE (PPM)	0.171	21
13--ETHANE (PPMC)	0.001	23
14--ETHYLENE (PPMC)	0.004	23
15--PROPANE (PPMC)	0.011	23
16--ACETYLENE (PPMC)	0.003	23
19--FLUOROCARBON-11 (PPT)	118.	23
20--CARBON TETRACHLORIDE (PPT)	85.	23

TABLE 39b.

SUBSTANCE — HOUR AVERAGES FOR AUGUST 20, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.300	1.700	3.450	4.825	6.025	6.850
2--WIND SPEED (MPH)	1.500	1.000	1.900	1.400	2.000	1.200	1.700	1.600	1.200	2.500	4.800	8.500
3--WIND DIRECTION (DEGREES)	254.	316.	340.	303.	319.	256.	252.	158.	208.	322.	287.	326.
4--TEMPERATURE (CENTIGRADE)	12.	13.	13.	13.	12.	11.	12.	16.	21.	22.	24.	25.
5--RELATIVE HUMIDITY (PERCENT)	91.	91.	92.	91.	92.	94.	92.	76.	51.	45.	40.	29.
6--OZONE (PPM)	.000	.000	.000	0.002	0.000	.000	.000	0.006	0.023	0.040	0.046	0.041
7--NITRIC OXIDE (PPM)	0.003	0.001	0.001	.000	.000	.000	0.009	0.001	0.000	0.001	0.001	0.001
8--NITROGEN DIOXIDE (PPM)	0.005	0.006	0.005	0.003	0.002	0.002	0.003	0.002	0.004	0.002	0.003	0.002
9--NITROGEN OXIDES (PPM)	0.008	0.006	0.006	0.003	0.002	0.002	0.011	0.003	0.005	0.003	0.004	0.002
10--METHANE (PPMC)	2.596	1.636	1.904	2.460	1.660	3.250	3.366	2.025	1.528	1.416	1.368	1.358
11--NON-METHANE HYDROCARBON (PPMC)	0.565	0.439	0.505	0.452	0.447	0.773	0.707	0.455	0.300	0.271	0.287	0.260
12--CARBON MONOXIDE (PPM)	0.162	0.162	0.188	0.138	0.112	0.138	0.275	0.162	0.125	0.075	0.087	0.037
13--ETHANE (PPMC)	0.002	0.001	0.001	0.001	0.001	0.001	.000	.000	0.001	0.001	0.001	0.003
14--ETHYLENE (PPMC)	0.005	0.003	0.006	0.004	0.004	0.006	0.004	0.001	0.004	0.001	0.002	0.001
15--PROPANE (PPMC)	0.020	0.039	0.015	0.015	0.040	0.015	0.017	0.011	0.006	.000	.000	.000
16--ACETYLENE (PPMC)	0.004	0.003	0.005	0.002	0.002	0.002	0.004	0.001	0.002	0.001	0.002	0.002
19--FLUOROCARBON-11 (PPT)	282.	119.	128.	127.	118.	163.	157.	132.	102.	101.	90.	77.
20--CARBON TETRACHLORIDE (PPT)	80.	75.	98.	95.	70.	105.	85.	90.	83.	65.	80.	60.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	7.225	5.350	4.950	5.125	4.550	3.200	1.400	0.300	0.100	0.050	.000	.000
2--WIND SPEED (MPH)	9.000	7.300	7.100	7.600	5.300	3.300	2.200	1.400	1.700	1.300	1.500	0.800
3--WIND DIRECTION (DEGREES)	337.	319.	313.	313.	293.	278.	277.	258.	281.	215.	283.	299.
4--TEMPERATURE (CENTIGRADE)	25.	25.	26.	26.	26.	26.	24.	20.	16.	14.	13.	12.
5--RELATIVE HUMIDITY (PERCENT)	26.	27.	27.	26.	26.	27.	32.	43.	70.	75.	81.	86.
6--OZONE (PPM)	0.043	0.049	0.043	0.042	0.047	0.042	0.034	0.025	0.008	0.002	.000	.000
7--NITRIC OXIDE (PPM)	0.001	0.001	0.003	0.001	0.005	0.002	0.005	0.006	0.005	0.009	0.013	0.010
8--NITROGEN DIOXIDE (PPM)	0.001	0.001	0.001	0.006	0.006	0.005	0.005	0.007	0.011	0.013	0.009	0.009
9--NITROGEN OXIDES (PPM)	0.001	0.002	0.004	0.007	0.010	0.007	0.011	0.013	0.016	0.021	0.021	0.019
10--METHANE (PPMC)	1.346	1.350	1.350	1.350	1.350	1.350	1.307	1.363	1.793	1.649	1.936	1.530
11--NON-METHANE HYDROCARBON (PPMC)	0.261	0.250	0.250	0.287	0.363	0.348	0.379	0.428	1.085	0.651	0.696	0.906
12--CARBON MONOXIDE (PPM)	0.100	-0.097	-0.094	-0.091	0.087	0.033	0.100	0.137	0.338	0.275	0.350	0.512
13--ETHANE (PPMC)	0.001	.000	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-0.001	0.002
14--ETHYLENE (PPMC)	0.002	.000	0.004	0.002	0.002	0.003	0.003	0.006	0.006	0.006	-0.007	0.008
15--PROPANE (PPMC)	0.002	0.006	.000	.000	.000	.000	.000	0.004	0.006	0.005	-0.030	0.055
16--ACETYLENE (PPMC)	0.001	0.002	0.006	0.001	0.002	0.003	0.001	0.004	0.004	0.006	-0.006	0.006
19--FLUOROCARBON-11 (PPT)	84.	85.	85.	86.	89.	83.	86.	106.	139.	124.	-129.	134.
20--CARBON TETRACHLORIDE (PPT)	110.	75.	83.	80.	68.	90.	65.	100.	98.	95.	-104.	113.

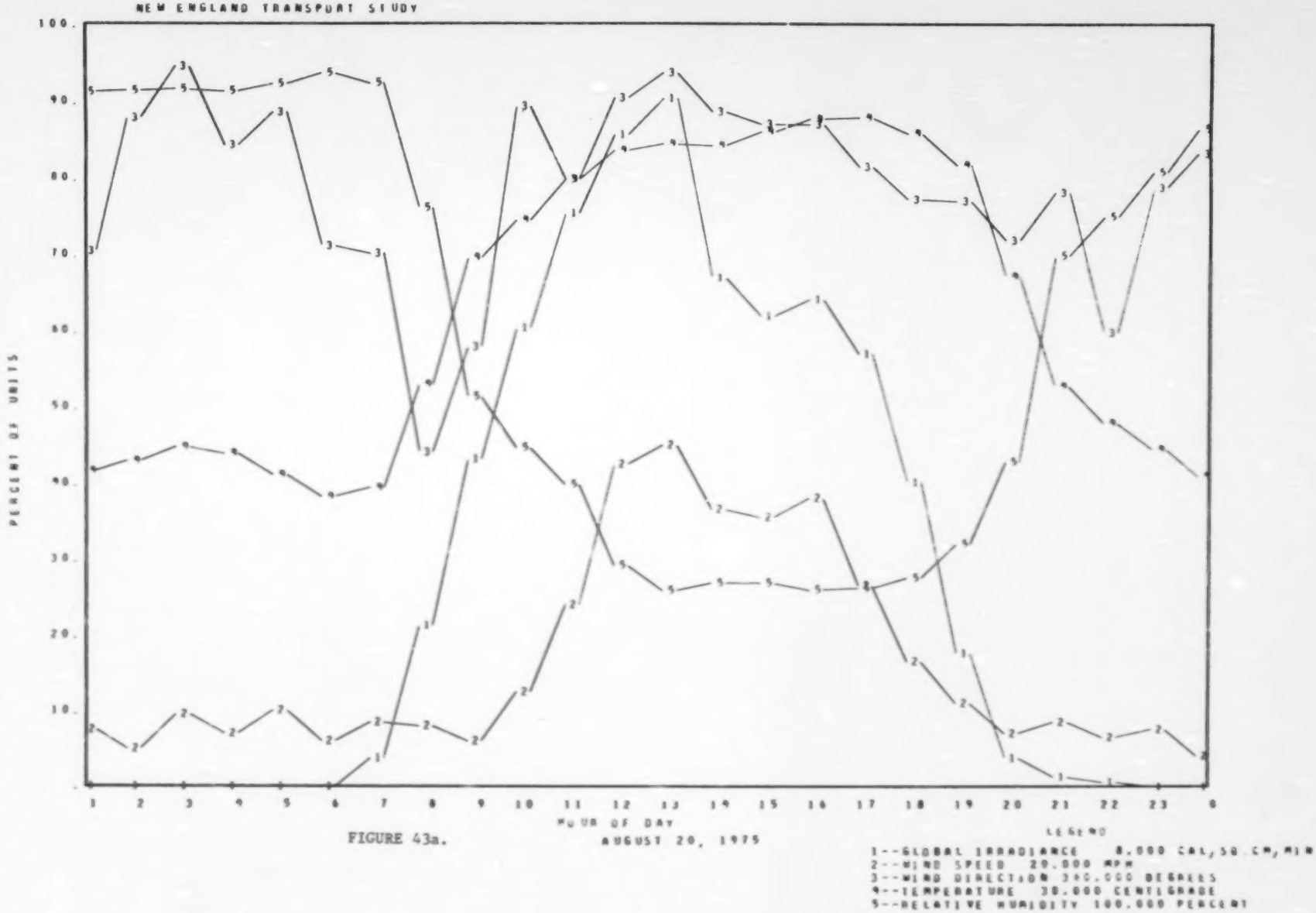

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--GLOBAL IRRADIANCE 8.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 43a.

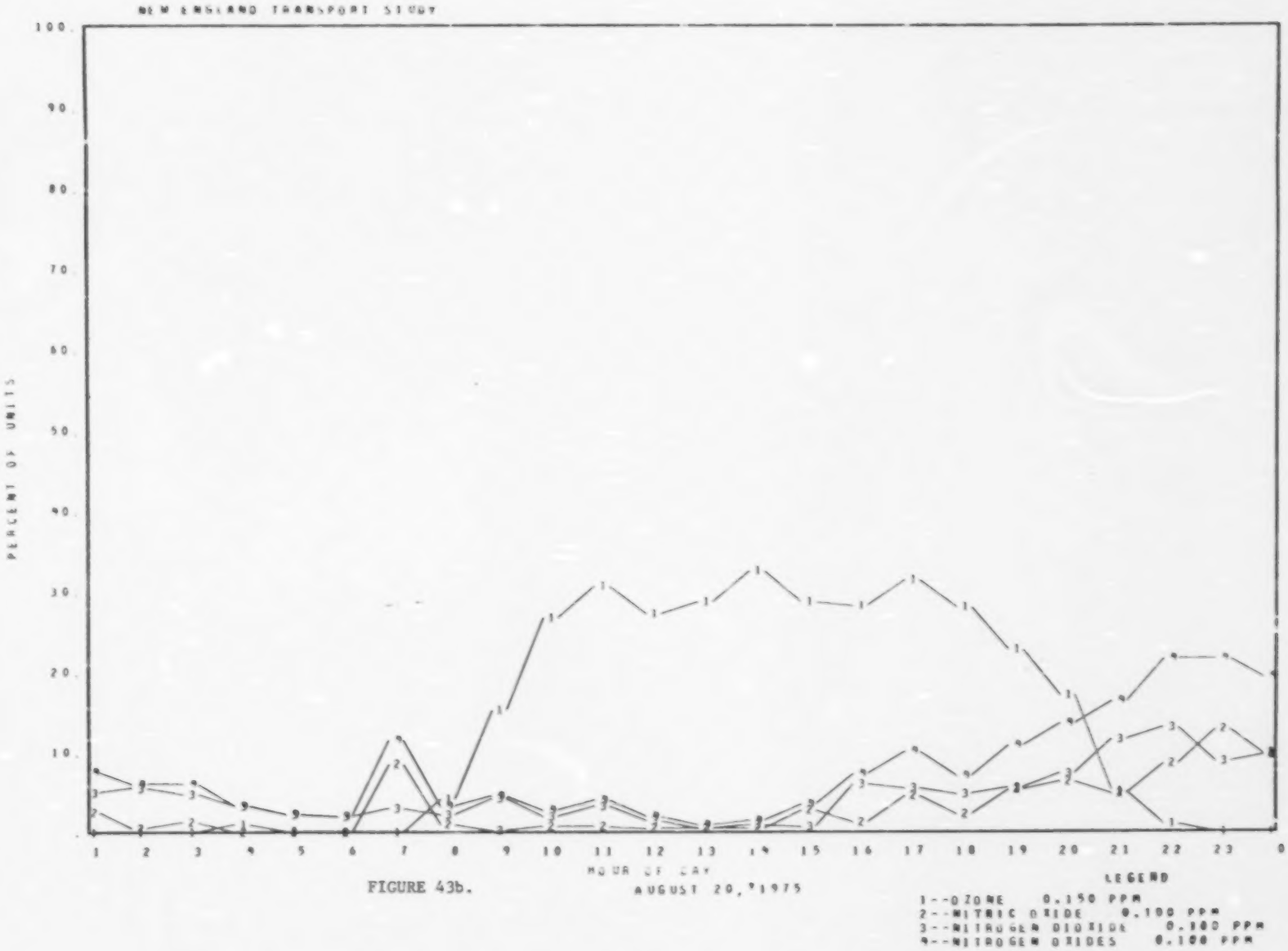

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
9--NITROGEN OXIDES 0.100 PPM

FIGURE 43b.

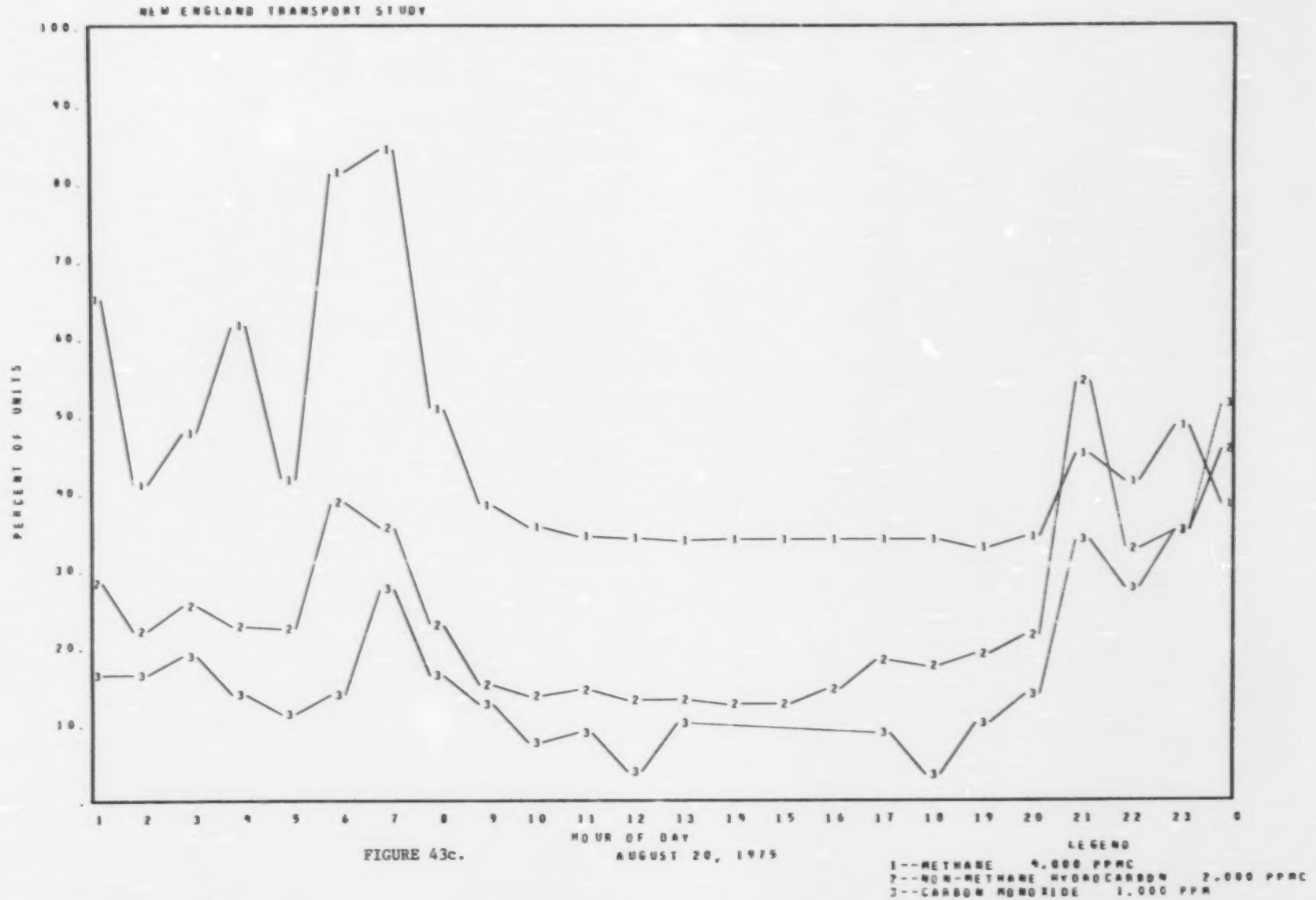

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--METHANE 9.000 PPMC
2--NON-METHANE HYDROCARBON 2.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 43c.

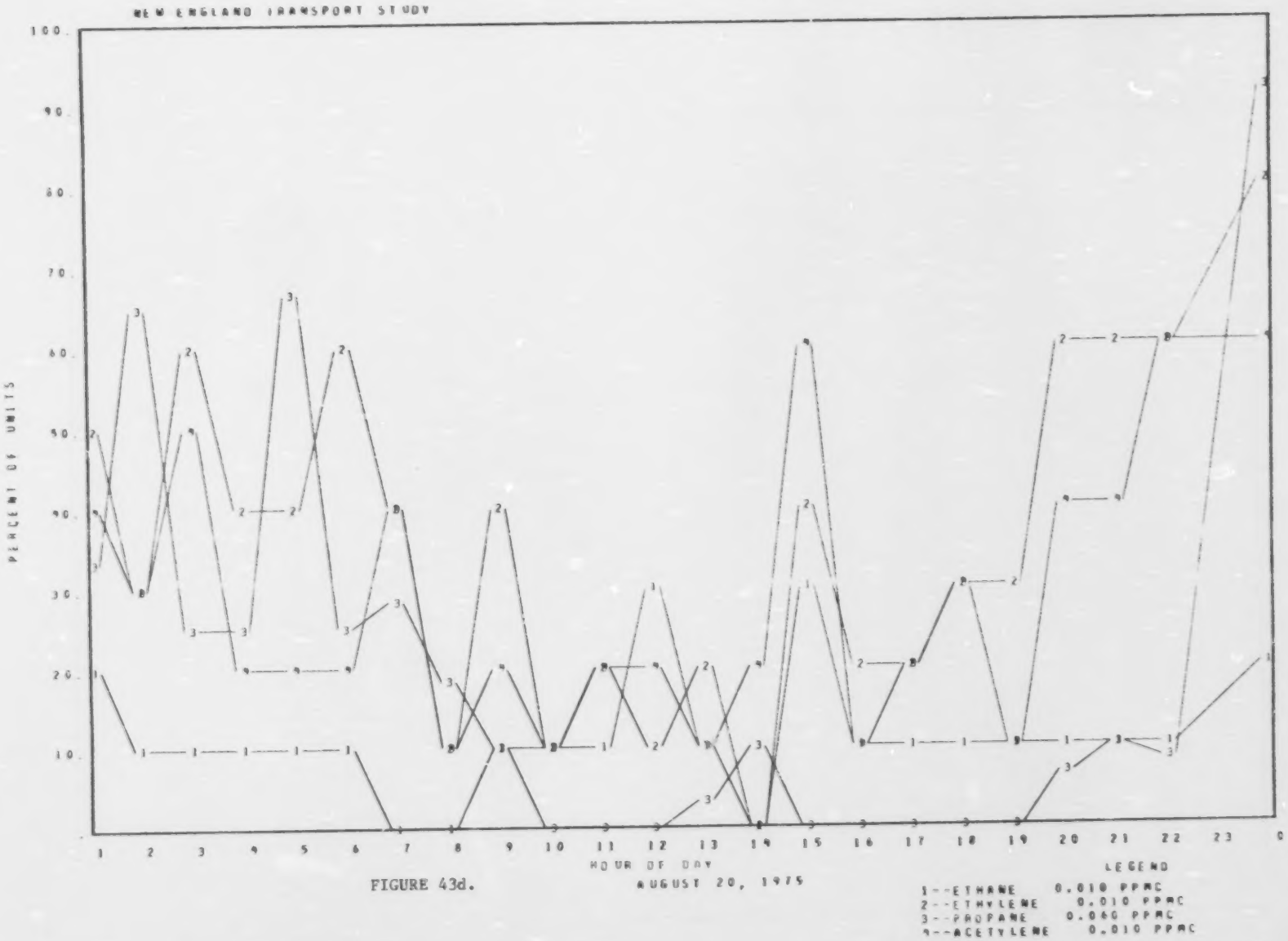

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.040 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 43d.

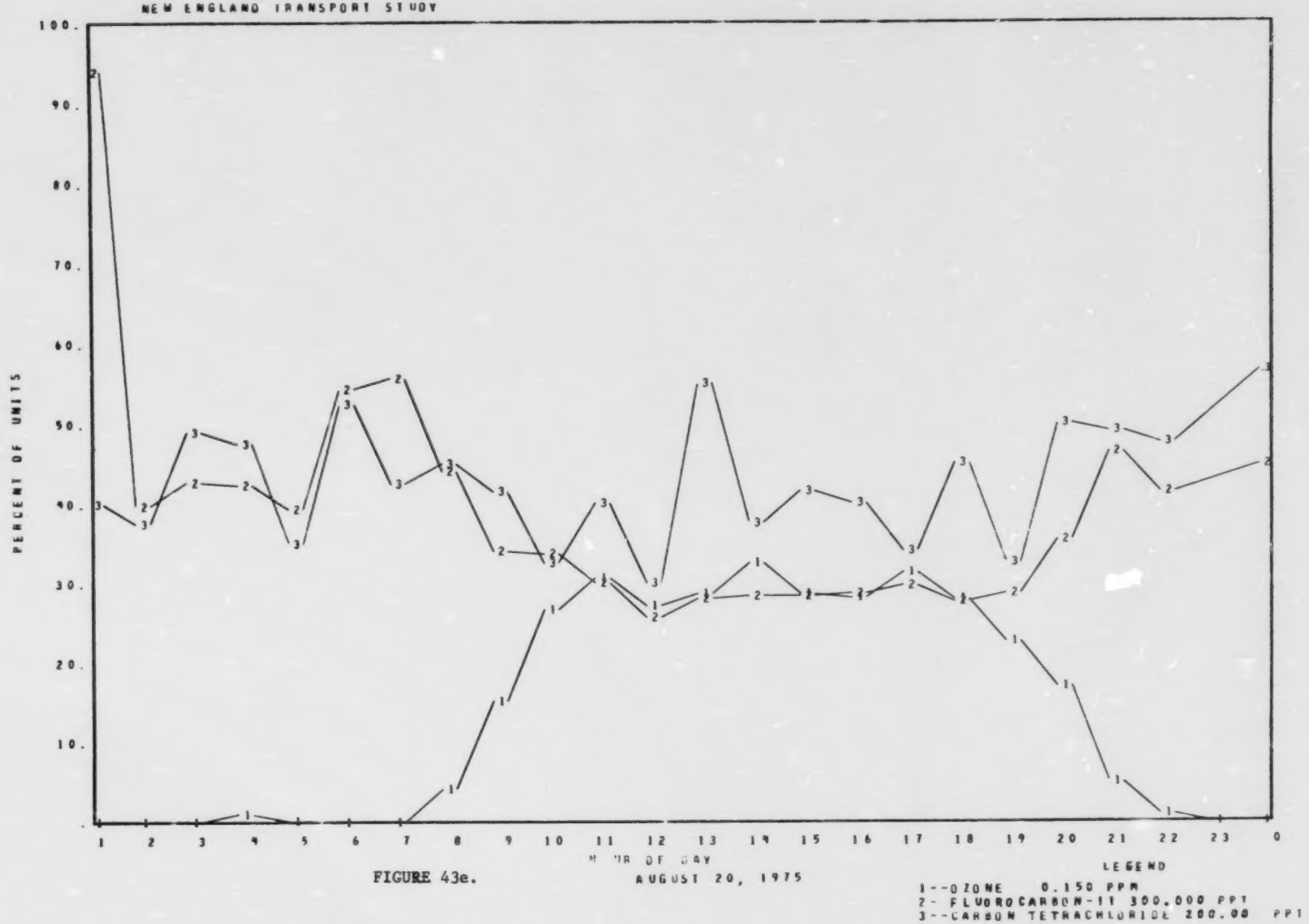

NEW ENGLAND TRANSPORT STUDY
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
PERCENT OF UNITS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 20, 1975
LEGEND
1--OZONE 0.150 PPM
2- FLUOROCARBON-11 300.000 PPT
3--CARBON TETRACHLORIDE 200.00 PPT

FIGURE 43e.

FIGURE 43f. WEDNESDAY, AUGUST 20, 1975

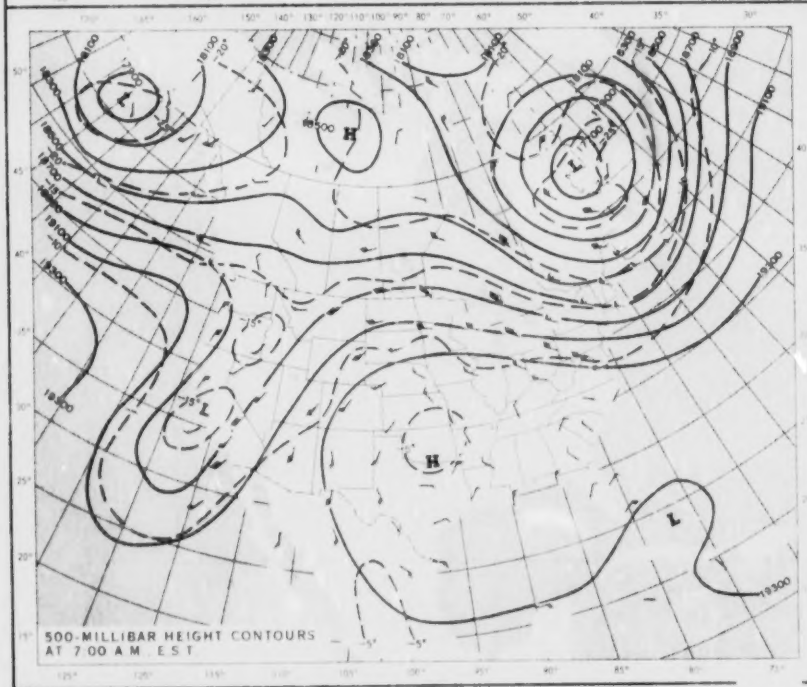


TABLE 40a. ALGUST 21, 1975

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	2.035	24
2--WIND SPEED (MPH)	3.400	24
3--WIND DIRECTION (DEGREES)	213.041	24
4--TEMPERATURE (CENTIGRADE)	19.174	24
5--RELATIVE HUMIDITY (PERCENT)	58.412	24
6--OZONE (PPM)	0.026	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.006	24
9--NITROGEN OXIDES (PPM)	0.009	24
10--METHANE (PPMC)	1.633	24
11--NON-METHANE HYDROCARBON (PPMC)	0.541	24
12--CARBON MONOXIDE (PPM)	0.288	24
13--ETHANE (PPMC)	0.002	24
14--ETHYLENE (PPMC)	0.005	24
15--PROPANE (PPMC)	0.014	24
16--ACETYLENE (PPMC)	0.005	24
19--FLUOROCARBON-11 (PPT)	111.	24
20--CARBON TETRACHLORIDE (PPT)	94.	22

TABLE 40b.

HOUR AVERAGES FOR AUGUST 21, 1975

SUBSTANCE	1	2	3	4	5	6	7	8	9	10	11	12
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	.000	.000	0.300	1.875	3.500	4.850	5.925	6.650
2--WIND SPEED (MPH)	1.600	1.900	2.600	1.400	1.100	1.200	0.800	1.500	2.300	2.500	2.300	5.600
3--WIND DIRECTION (DEGREES)	241.	216.	186.	201.	287.	331.	326.	336.	166.	171.	193.	169.
4--TEMPERATURE (CENTIGRADE)	12.	12.	11.	11.	9.	8.	10.	14.	19.	22.	25.	26.
5--RELATIVE HUMIDITY (PERCENT)	87.	88.	89.	89.	90.	92.	88.	72.	58.	45.	37.	30.
6--OZONE (PPM)	.000	0.000	0.004	0.006	0.009	.000	.000	0.001	0.005	0.017	0.028	0.031
7--NITRIC OXIDE (PPM)	0.008	0.002	.000	.000	.000	0.002	0.014	0.009	0.007	0.002	.000	0.000
8--NITROGEN DIOXIDE (PPM)	0.011	0.010	0.004	0.002	0.002	0.002	0.002	0.004	0.005	0.003	0.002	0.001
9--NITROGEN OXIDES (PPM)	0.019	0.012	0.004	0.002	0.002	0.004	0.016	0.012	0.012	0.004	0.002	0.001
10--METHANE (PPMC)	1.450	2.030	2.380	2.280	1.550	1.500	1.500	2.100	1.700	1.500	1.450	1.300
11--NON-METHANE HYDROCARBON (PPMC)	0.599	0.611	0.614	0.576	0.684	0.559	0.609	0.704	0.544	0.394	0.400	0.568
12--CARBON MONOXIDE (PPM)	0.375	0.313	0.200	0.112	0.138	0.162	0.300	0.300	0.300	0.325	0.112	0.150
13--ETHANE (PPMC)	0.002	0.001	0.002	0.001	0.002	0.003	0.004	0.002	0.002	.000	0.001	0.001
14--ETHYLENE (PPMC)	0.008	0.007	0.004	0.006	0.005	0.004	0.008	0.008	0.010	.000	0.003	0.001
15--PROPANE (PPMC)	0.022	0.010	0.011	0.014	0.029	0.095	0.106	0.018	0.011	.000	.000	.000
16--ACETYLENE (PPMC)	0.007	0.005	0.004	0.003	0.002	0.004	0.004	0.006	0.015	.000	0.002	0.001
19--FLUOROCARBON-11 (PPT)	117.	111.	114.	136.	103.	93.	102.	121.	111.	81.	83.	83.
20--CARBON TETRACHLORIDE (PPT)	100.	85.	98.	85.	90.	75.	80.	80.	75.	68.	155.	-118.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	6.700	5.975	5.075	4.275	2.075	0.975	0.375	0.125	0.100	0.075	.000	.000
2--WIND SPEED (MPH)	6.200	5.900	5.400	6.400	5.300	5.000	2.900	2.700	4.200	4.400	3.800	4.600
3--WIND DIRECTION (DEGREES)	190.	200.	219.	207.	210.	202.	165.	189.	168.	180.	187.	172.
4--TEMPERATURE (CENTIGRADE)	27.	27.	27.	26.	25.	23.	22.	21.	21.	21.	21.	20.
5--RELATIVE HUMICITY (PERCENT)	28.	29.	30.	31.	35.	41.	48.	51.	53.	56.	64.	72.
6--OZONE (PPM)	0.038	0.040	0.036	0.034	0.037	0.044	0.037	0.033	0.043	0.057	0.055	0.055
7--NITRIC OXIDE (PPM)	0.000	0.000	0.002	0.001	0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.004
8--NITROGEN DIOXIDE (PPM)	0.001	0.002	0.000	.000	0.006	0.007	0.007	0.013	0.016	0.019	0.017	0.011
9--NITROGEN OXIDES (PPM)	0.002	0.002	0.002	0.001	0.007	0.009	0.009	0.015	0.019	0.022	0.020	0.015
10--METHANE (PPMC)	1.400	1.300	1.400	1.400	1.500	1.500	1.550	2.000	1.600	1.600	1.700	1.500
11--NON-METHANE HYDROCARBON (PPMC)	0.480	0.598	0.473	0.496	0.455	0.484	0.458	0.640	0.456	0.534	0.551	0.490
12--CARBON MONOXIDE (PPM)	0.133	1.050	0.050	.000	0.063	0.100	0.175	0.400	0.450	0.625	0.587	0.487
13--ETHANE (PPMC)	.000	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.002	0.004	0.003	0.003
14--ETHYLENE (PPMC)	0.002	0.001	0.004	0.009	0.005	0.002	0.003	0.004	0.006	0.008	0.009	0.006
15--PROPANE (PPMC)	.000	.000	.000	.000	0.005	.000	.000	.000	.000	0.003	.000	0.003
16--ACETYLENE (PPMC)	.000	0.001	0.004	0.004	0.005	0.002	0.001	0.005	0.007	0.010	0.012	0.009
19--FLUOROCARBON-11 (PPT)	77.	77.	73.	78.	87.	87.	96.	145.	149.	187.	188.	156.
20--CARBON TETRACHLORIDE (PPT)	-82.	45.	68.	70.	70.	75.	75.	95.	128.	140.	145.	165.

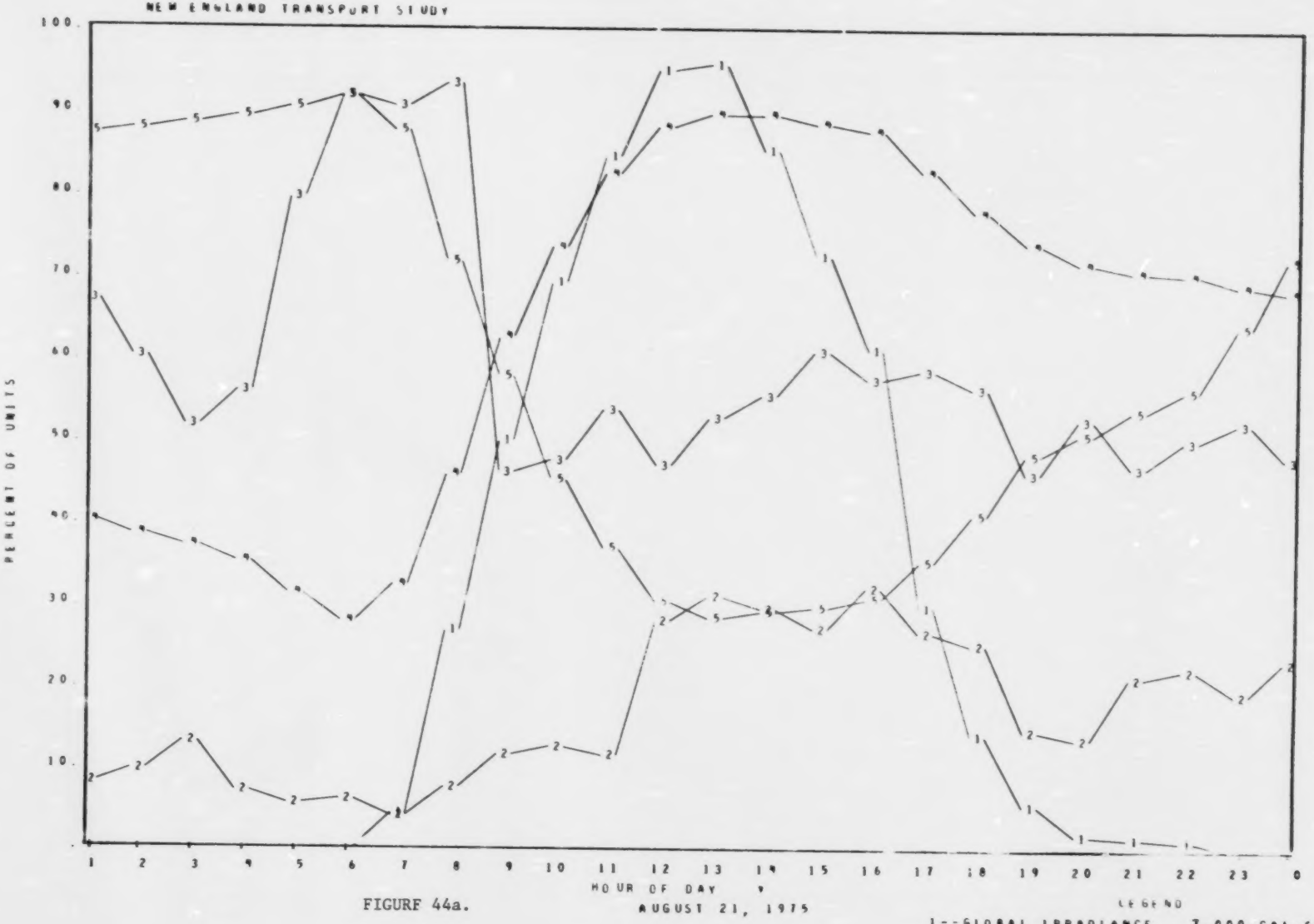

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100
90
80
70
60
50
40
30
20
10
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 21, 1975
LEGEND
1--GLOBAL IRRADIANCE 7.000 CAL.SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 44a.

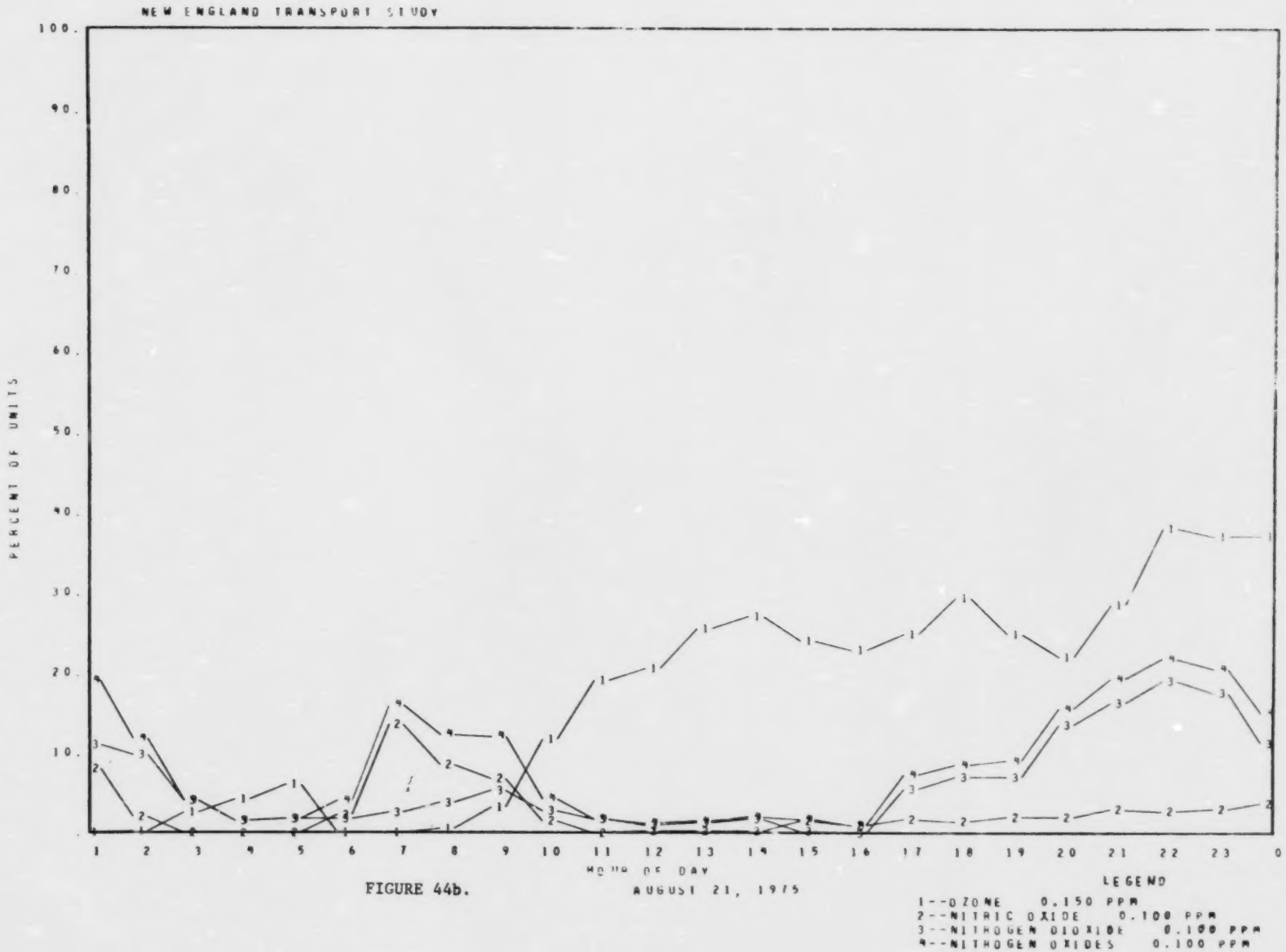

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 21, 1975
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 44b.

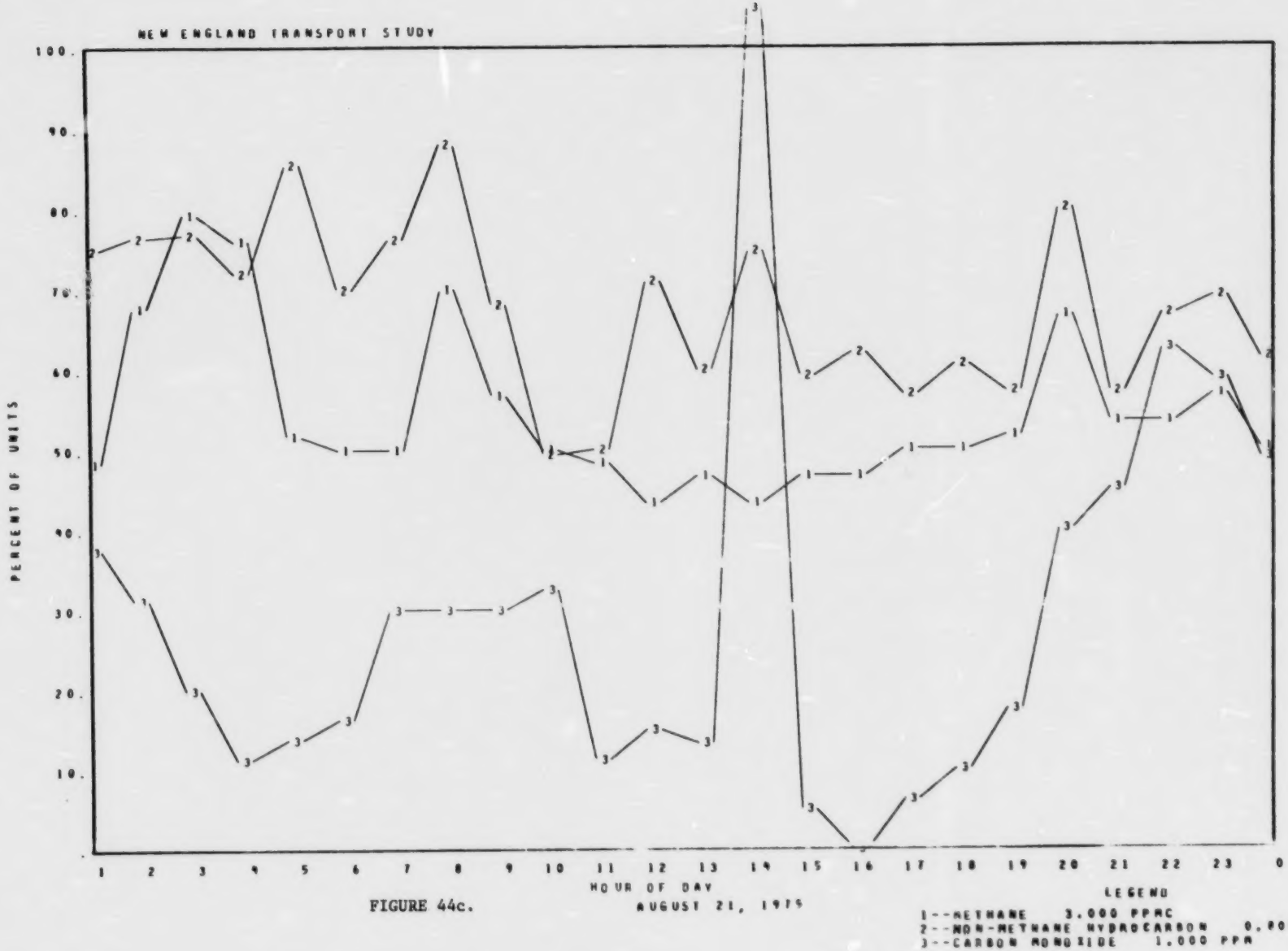

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 21, 1975
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.000 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 44c.

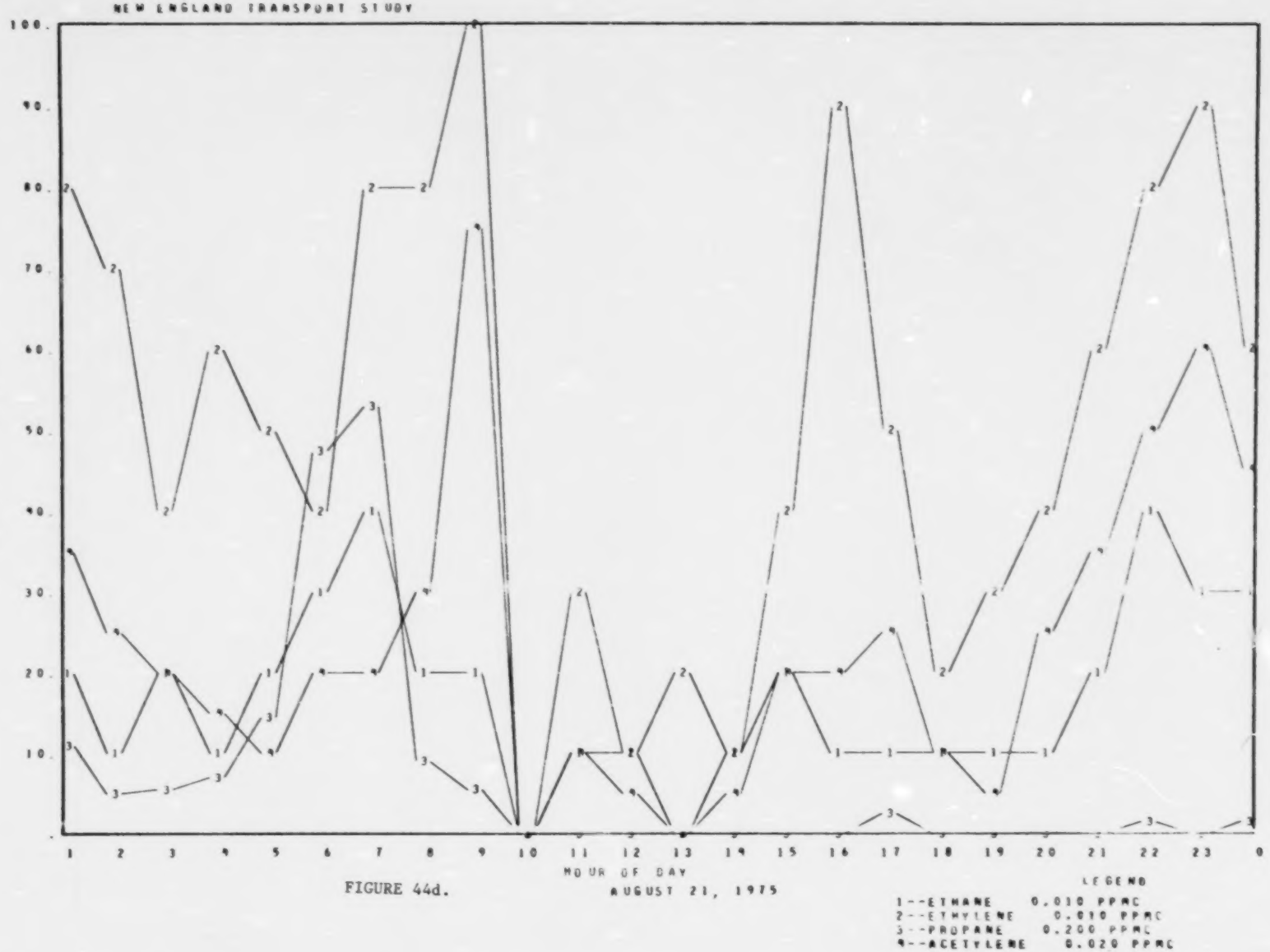

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 21, 1975
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.200 PPMC
4--ACETYLENE 0.020 PPMC

FIGURE 44d.

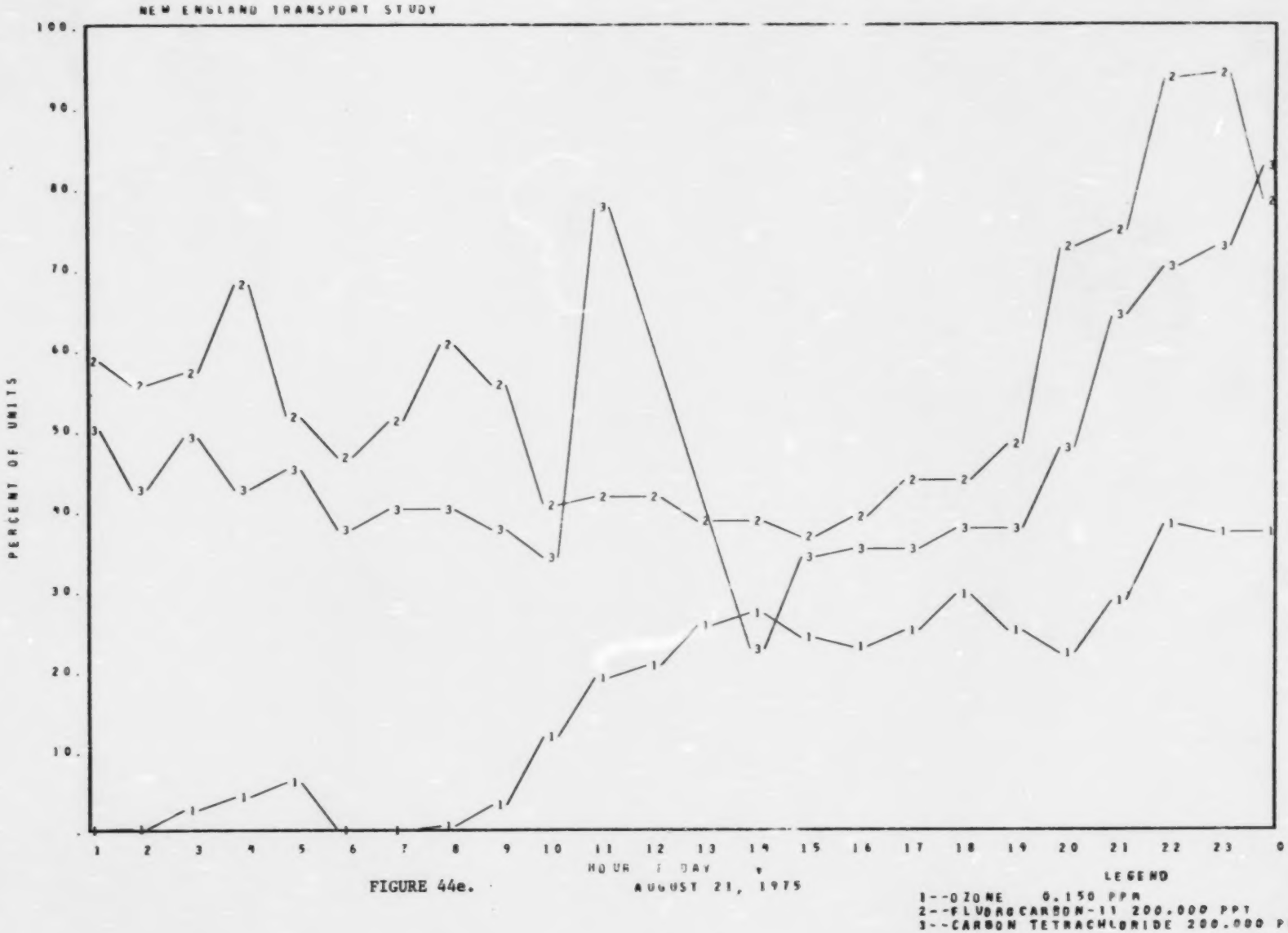
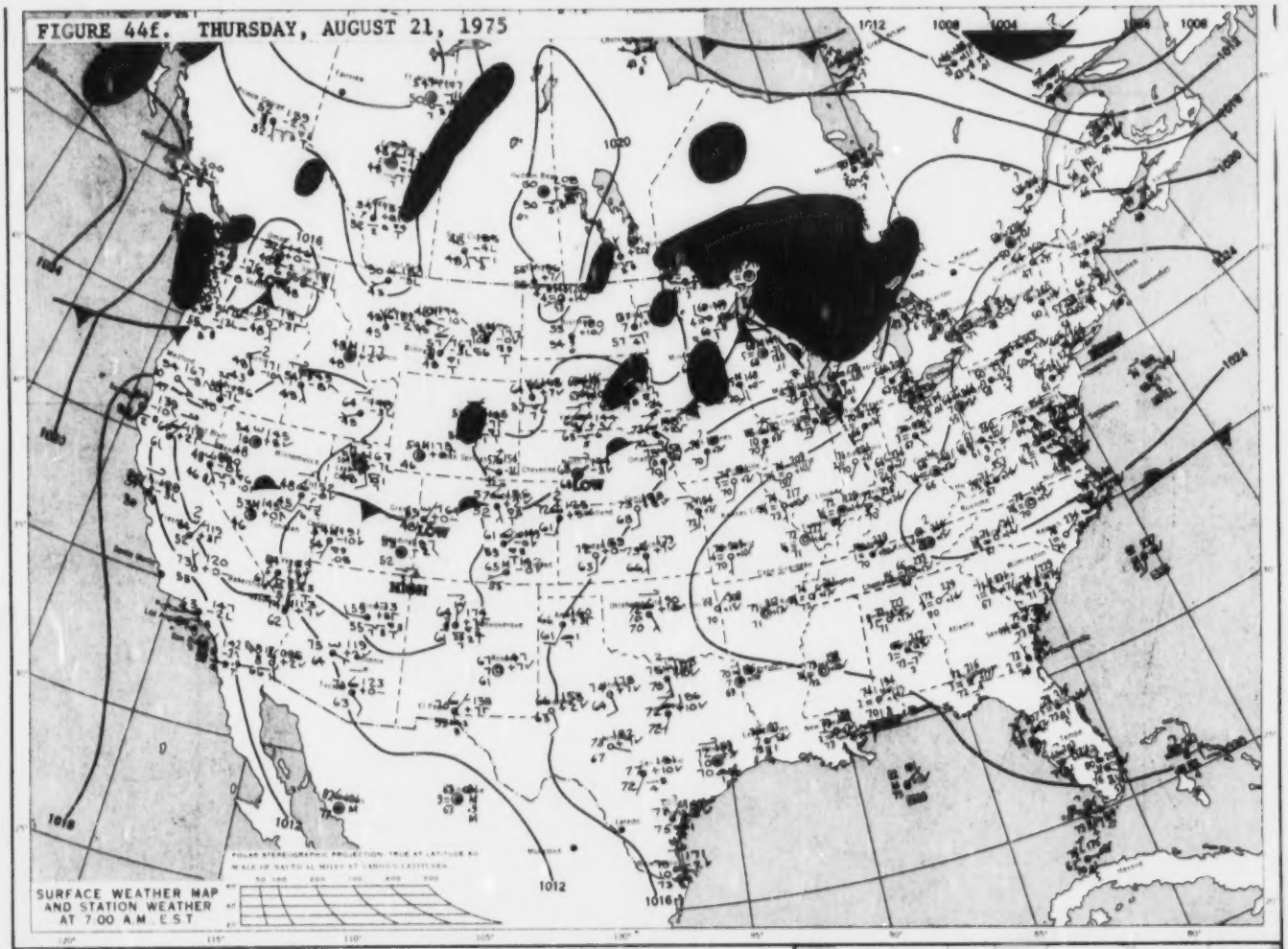

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
AUGUST 21, 1975
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 200.000 PPT

FIGURE 44e.

FIGURE 44f. THURSDAY, AUGUST 21, 1975



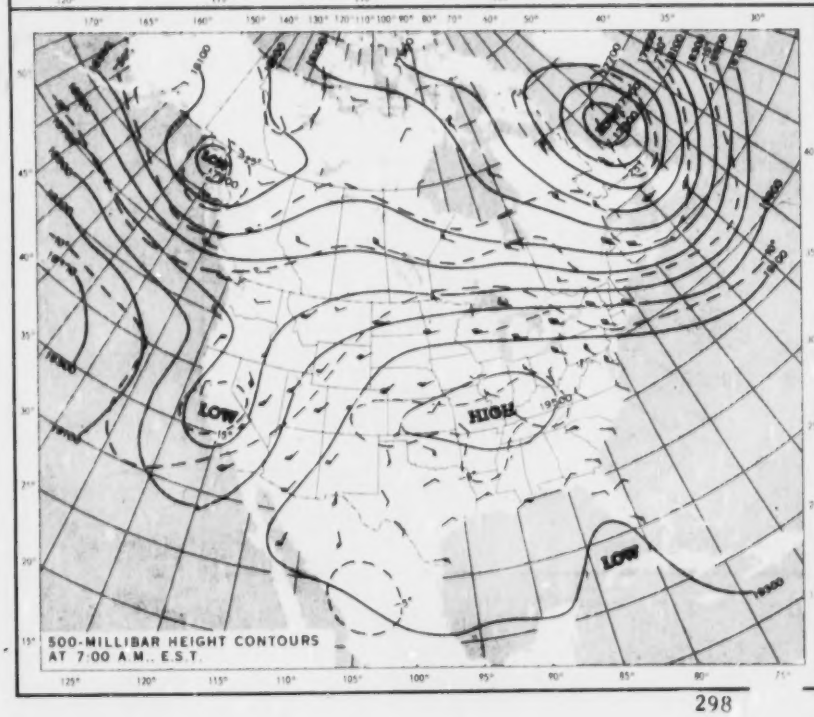


TABLE 41a. ALL DAYS*

SUBSTANCE	AVERAGE	
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	1.898	24
2--WIND SPEED (MPH)	3.668	24
3--WIND DIRECTION (DEGREES)	240.870	24
4--TEMPERATURE (CENTIGRADE)	23.653	24
5--RELATIVE HUMIDITY (PERCENT)	68.334	24
6--OZONE (PPM)	0.031	24
7--NITRIC OXIDE (PPM)	0.003	24
8--NITROGEN DIOXIDE (PPM)	0.005	24
9--NITROGEN OXIDES (PPM)	0.008	24
10--METHANE (PPMC)	1.695	24
11--NON-METHANE HYDROCARBON (PPMC)	0.445	24
12--CARBON MONOXIDE (PPM)	0.193	24
13--ETHANE (PPMC)	0.002	24
14--ETHYLENE (PPMC)	0.004	24
15--PROPANE (PPMC)	0.009	24
16--ACETYLENE (PPMC)	0.004	24
17--ISO-BUTANE (PPMC)	0.005	20
18--N-BUTANE (PPMC)	0.008	20
19--FLUOROCARBON-11 (PPT)	145.	24
20--CARBON TETRACHLORIDE (PPT)	122.	24

TABLE 41b.

SUBSTANCE	HOUR AVERAGES FOR ALL DAYS*											
	1	2	3	4	5	6	7	8	9	10	[illegible]	[illegible]
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	.000	.000	.000	.000	0.001	0.026	0.401	1.445	2.681	3.811	[illegible]	[illegible]
2--WIND SPEED (MPH)	2.623	2.315	2.177	2.369	2.393	2.322	2.219	2.761	3.559	4.601	[illegible]	[illegible]
3--WIND DIRECTION (DEGREES)	245.	226.	233.	239.	259.	242.	233.	234.	248.	247.	[illegible]	[illegible]
4--TEMPERATURE (CENTIGRADE)	20.	19.	19.	19.	18.	18.	19.	21.	23.	25.	27.	28.
5--RELATIVE HUMIDITY (PERCENT)	86.	88.	88.	89.	90.	91.	89.	80.	69.	61.	55.	51.
6--OZONE (PPM)	0.014	0.013	0.013	0.014	0.014	0.012	0.010	0.012	0.022	0.033	0.042	0.047
7--NITRIC OXIDE (PPM)	0.004	0.002	0.002	0.001	0.001	0.002	0.004	0.004	0.003	0.003	[illegible]	0.002
8--NITROGEN DIOXIDE (PPM)	0.008	0.007	0.005	0.004	0.003	0.003	0.003	0.004	0.004	0.004	[illegible]	0.003
9--NITROGEN OXIDES (PPM)	0.011	0.009	0.007	0.005	0.005	0.005	0.008	0.009	0.007	0.006	[illegible]	0.005
10--METHANE (PPMC)	1.813	1.902	1.851	1.914	1.868	1.803	2.155	1.864	1.675	1.544	[illegible]	1.464
11--NON-METHANE HYDROCARBON (PPMC)	0.462	0.471	0.446	0.404	0.431	0.405	0.459	0.413	0.360	0.375	[illegible]	0.427
12--CARBON MONOXIDE (PPM)	0.280	0.232	0.218	0.191	0.184	0.200	0.241	0.329	0.253	0.198	[illegible]	0.095
13--ETHANE (PPMC)	0.002	0.001	0.002	0.001	0.002	0.002	0.002	0.002	0.002	0.002	[illegible]	0.001
14--ETHYLENE (PPMC)	0.006	0.004	0.003	0.003	0.003	0.002	0.005	0.005	0.005	0.003	[illegible]	0.001
15--PROPANE (PPMC)	0.012	0.011	0.008	0.013	0.015	0.018	0.034	0.013	0.014	0.005	[illegible]3	0.00
16--ACETYLENE (PPMC)	0.005	0.003	0.003	0.003	0.002	0.002	0.005	0.005	0.007	0.007	106	0.00
17--ISO-BUTANE (PPMC)	0.006	0.005	0.003	0.006	0.006	0.004	.000	.000	0.004	-1.000	.000	0.00
18--N-BUTANE (PPMC)	0.009	0.009	0.006	0.009	.000	0.004	.000	.000	0.002	-1.000	-1.000	0.007
19--FLUOROCARBON-11 (PPT)	180.	161.	153.	152.	146.	145.	154.	148.	144.	131.	126.	125.
20--CARBON TETRACHLORIDE (PPT)	141.	137.	131.	134.	130.	125.	128.	121.	128.	106.	115.	112.

SUBSTANCE	13	14	15	16	17	18	19	20	21	22	23	24
1--GLOBAL IRRADIANCE (CAL/SQ.CM/MIN)	5.416	5.384	4.980	4.470	3.399	2.314	1.066	0.285	0.074	0.008	.000	.000
2--WIND SPEED (MPH)	5.355	5.459	5.538	5.758	5.225	4.717	4.100	3.151	2.846	2.879	2.645	2.780
3--WIND DIRECTION (DEGREES)	231.	245.	248.	244.	252.	248.	245.	241.	244.	238.	234.	239.
4--TEMPERATURE (CENTIGRADE)	29.	29.	30.	33.	29.	29.	27.	25.	23.	21.	21.	20.
5--RELATIVE HUMIDITY (PERCENT)	48.	46.	44.	44.	45.	48.	52.	60.	71.	78.	82.	84.
6--OZONE (PPM)	0.051	0.055	0.056	0.055	0.055	0.055	0.051	0.042	0.028	0.020	0.015	0.015
7--NITRIC OXIDE (PPM)	0.002	0.002	0.003	0.003	0.004	0.004	0.003	0.004	0.004	0.004	0.004	0.004
8--NITROGEN DIOXIDE (PPM)	0.002	0.002	0.003	0.003	0.004	0.004	0.004	0.006	0.008	0.009	0.009	0.008
9--NITROGEN OXIDES (PPM)	0.005	0.005	0.006	0.006	0.008	0.008	0.007	0.010	0.012	0.013	0.013	0.012
10--METHANE (PPMC)	1.433	1.437	1.442	1.406	1.434	1.428	1.449	1.549	1.790	1.970	2.140	1.835
11--NON-METHANE HYDROCARBON (PPMC)	0.459	0.462	0.458	0.442	0.473	0.407	0.536	0.521	0.463	0.489	0.454	0.458
12--CARBON MONOXIDE (PPM)	0.078	0.117	0.081	0.115	0.118	0.134	0.127	0.164	0.231	0.271	0.307	0.331
13--ETHANE (PPMC)	0.001	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
14--ETHYLENE (PPMC)	0.002	0.003	0.003	0.004	0.004	0.004	0.003	0.004	0.007	0.006	0.005	0.006
15--PROPANE (PPMC)	0.002	0.002	0.001	0.002	0.003	0.003	0.005	0.005	0.008	0.007	0.007	0.012
16--ACETYLENE (PPMC)	0.002	0.003	0.003	0.003	0.004	0.004	0.002	0.004	0.006	0.005	0.005	0.005
17--ISO-BUTANE (PPMC)	0.003	-1.000	-1.000	0.008	0.005	0.004	0.007	0.007	0.008	0.004	0.003	0.001
18--N-BUTANE (PPMC)	0.005	-1.000	-1.000	0.008	0.009	0.014	0.014	0.026	0.013	0.007	0.006	0.004
19--FLUOROCARBON-11 (PPT)	122.	129.	127.	129.	129.	130.	135.	143.	153.	173.	181.	168.
20--CARBON TETRACHLORIDE (PPT)	107.	122.	121.	120.	101.	103.	107.	111.	133.	124.	143.	127.

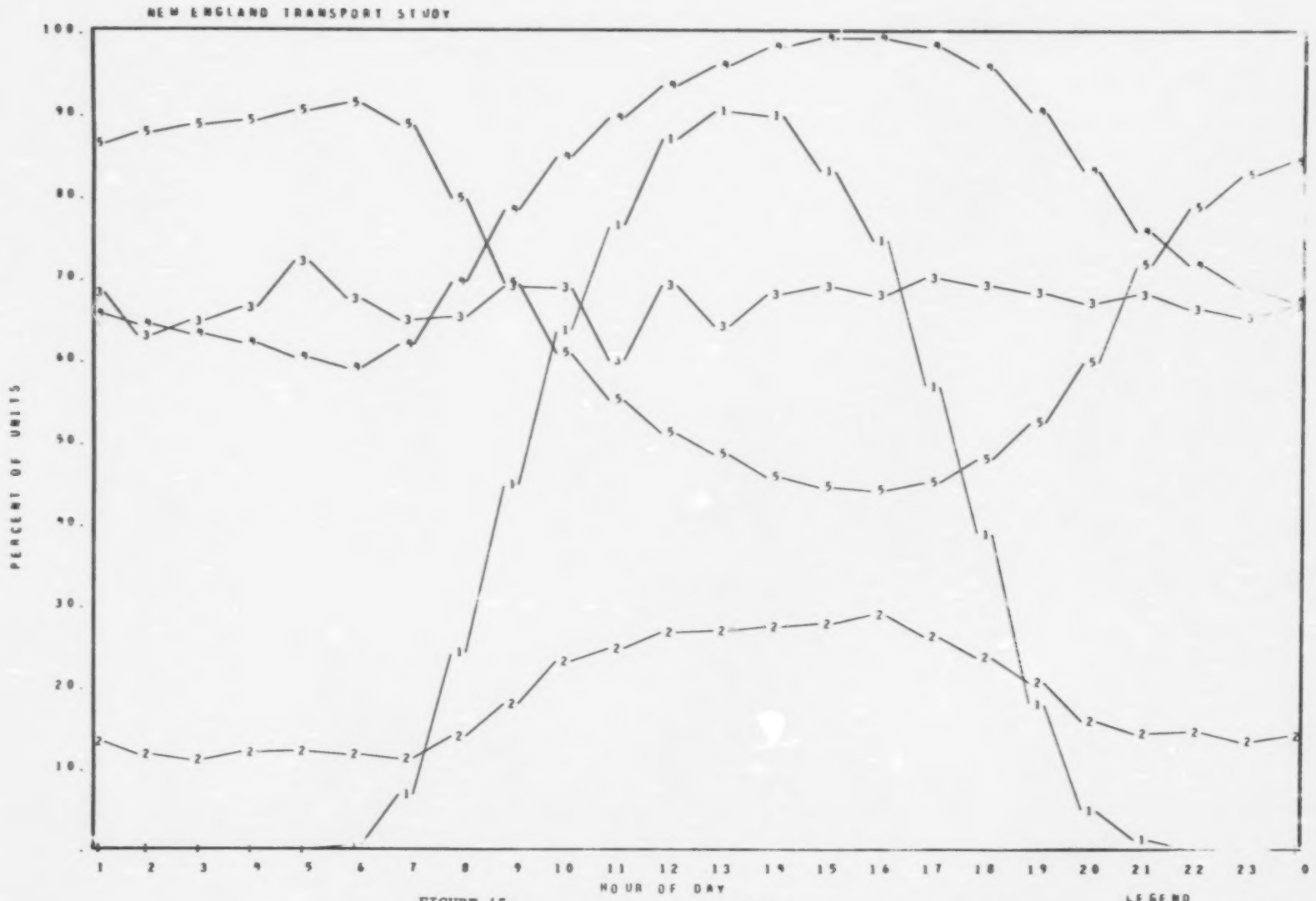

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--GLOBAL IRRADIANCE 6.000 CAL/SQ.CM/MIN
2--WIND SPEED 20.000 MPH
3--WIND DIRECTION 360.000 DEGREES
4--TEMPERATURE 30.000 CENTIGRADE
5--RELATIVE HUMIDITY 100.000 PERCENT

FIGURE 45a.

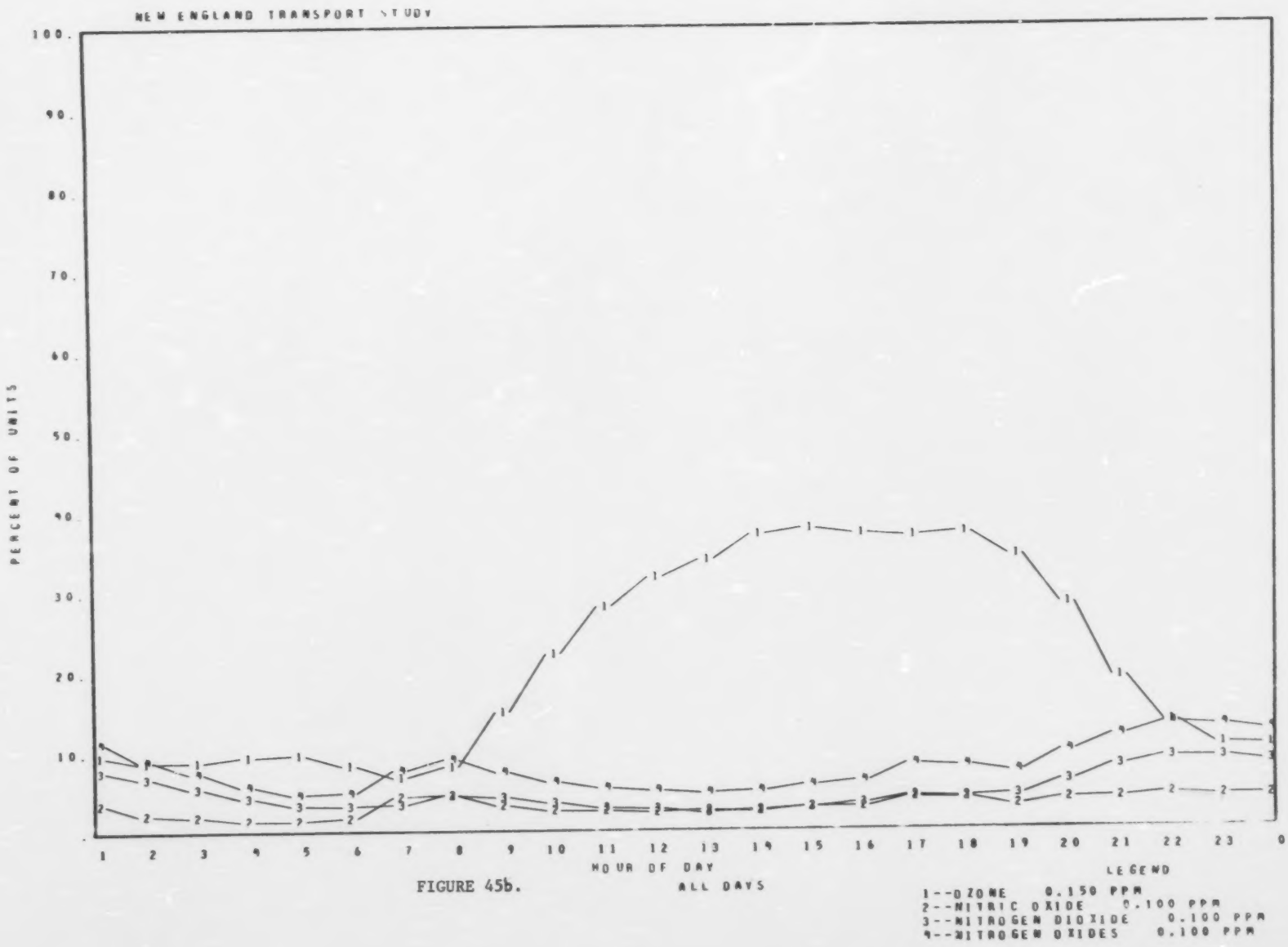

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--OZONE 0.150 PPM
2--NITRIC OXIDE 0.100 PPM
3--NITROGEN DIOXIDE 0.100 PPM
4--NITROGEN OXIDES 0.100 PPM

FIGURE 45b.

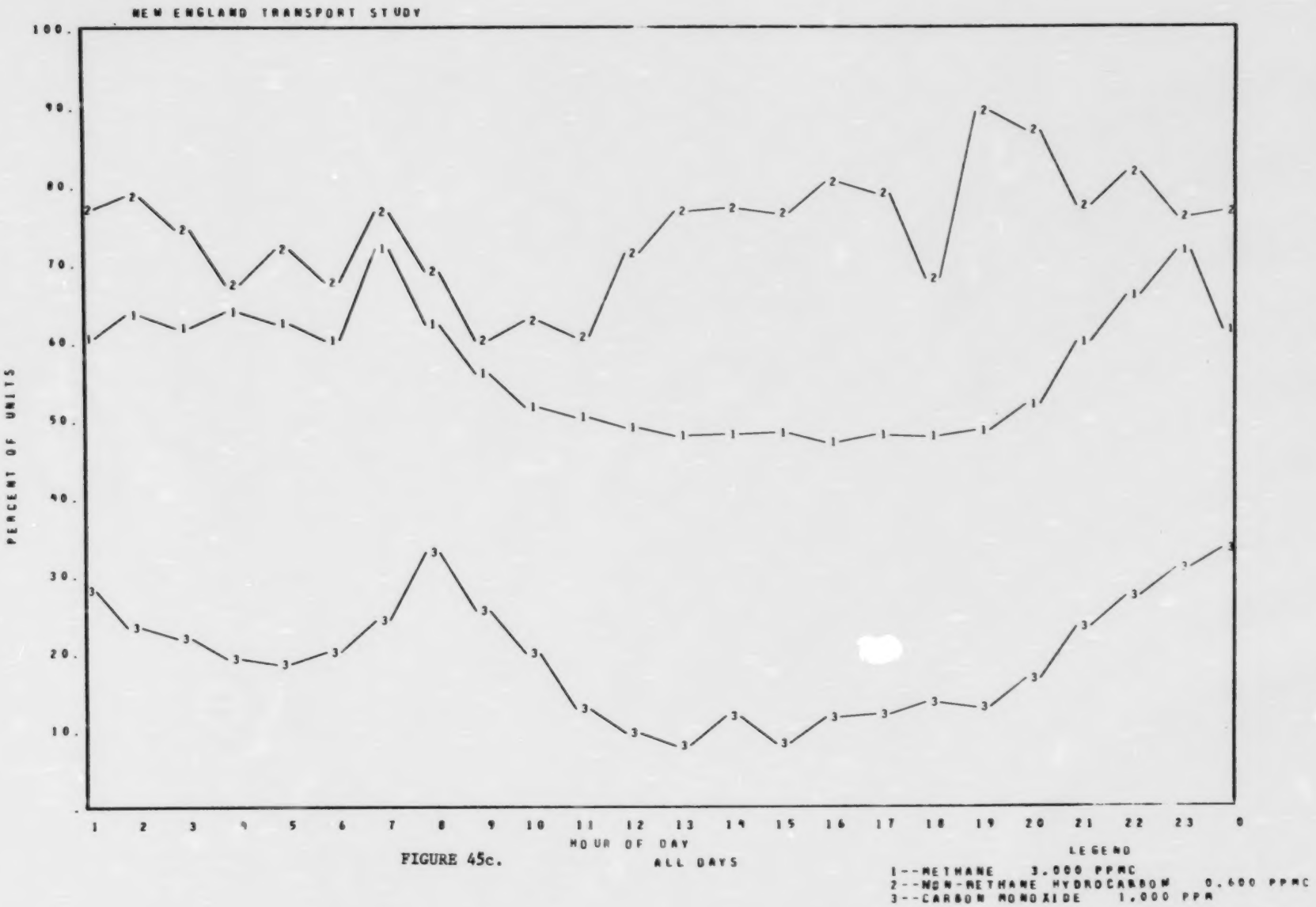

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--METHANE 3.000 PPMC
2--NON-METHANE HYDROCARBON 0.600 PPMC
3--CARBON MONOXIDE 1.000 PPM

FIGURE 45c.

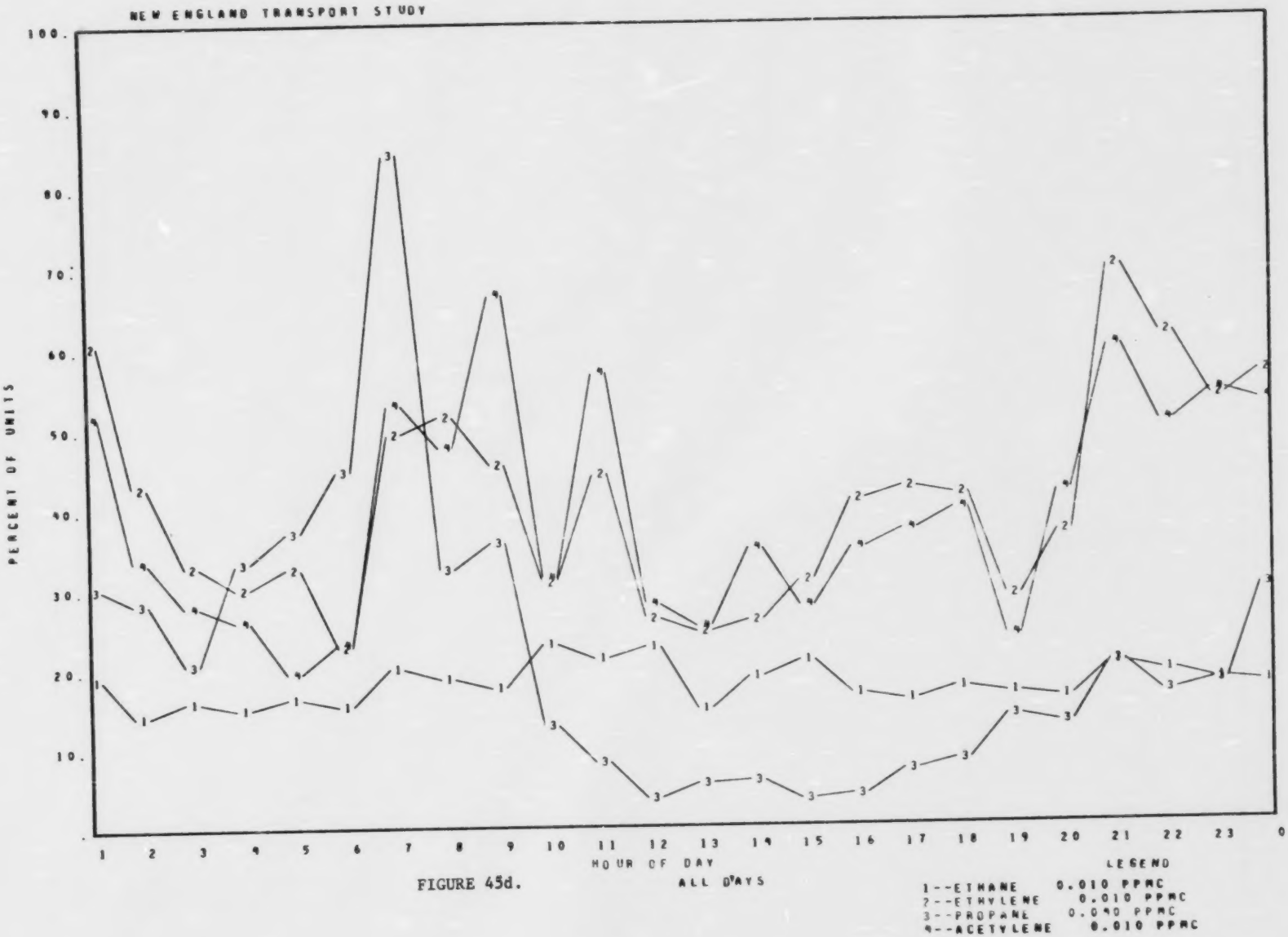

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--ETHANE 0.010 PPMC
2--ETHYLENE 0.010 PPMC
3--PROPANE 0.010 PPMC
4--ACETYLENE 0.010 PPMC

FIGURE 45d.

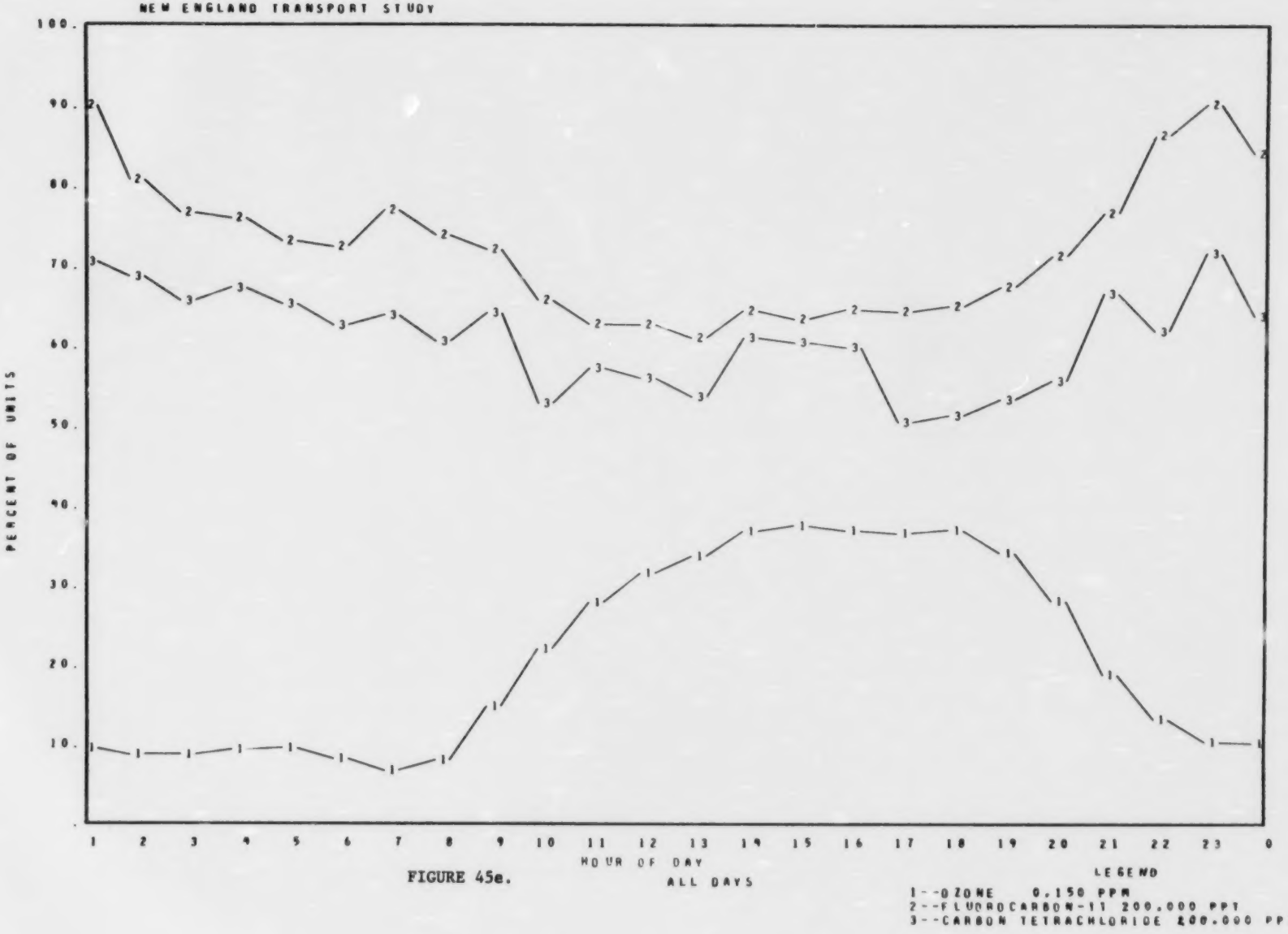

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--OZONE 0.150 PPM
2--FLUOROCARBON-11 200.000 PPT
3--CARBON TETRACHLORIDE 100.000 PPT

FIGURE 45e.

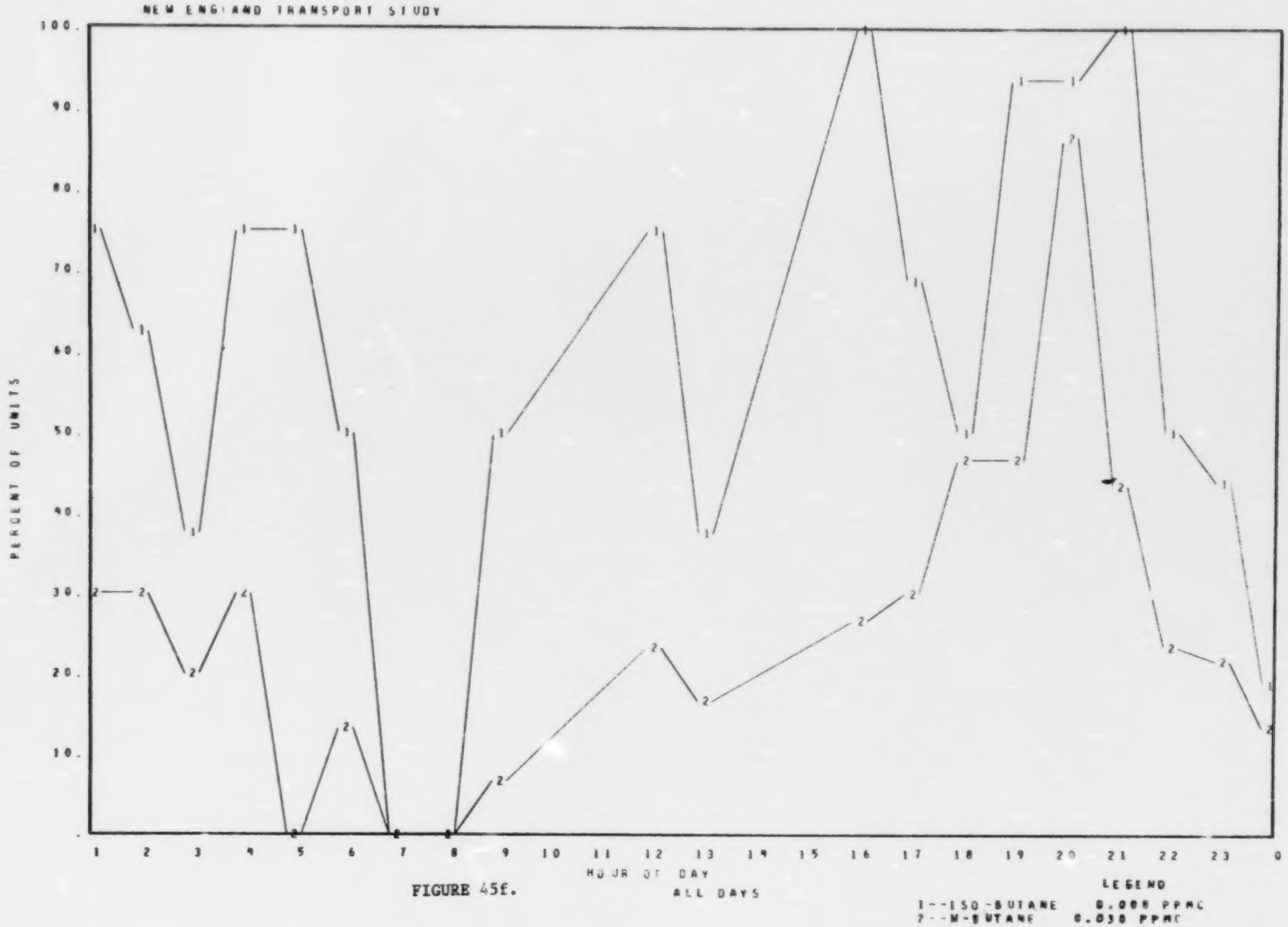

NEW ENGLAND TRANSPORT STUDY
PERCENT OF UNITS
100.
90.
80.
70.
60.
50.
40.
30.
20.
10.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 0
HOUR OF DAY
ALL DAYS
LEGEND
1--ISO-BUTANE 0.000 PPMC
2--N-BUTANE 0.030 PPMC

FIGURE 45f.

The composite daily averages and hourly averages for the entire study period are given in Tables 41a and b. The composite profiles for the entire study period are pictured in Figures 45a through f.

Aircraft Sampling Results

A log of the Battelle aircraft sampling flights carried out during the 1975 New England study is given in Table 42.

In this data report, each aircraft flight is represented on a map showing the flight pattern and the ozone concentration along the flight path in parts per billion by volume. All flights were conducted at an altitude of 1000 feet above ground level unless otherwise noted. The arrows on the flight paths indicate the direction of flight. Large spaces between plotted ozone concentration values indicate that the ozone concentration was essentially constant between those values.

The sites of bag sample collection are marked along each flight path together with the bag number. The results of the analysis of each bag sample are displayed in the lower right corner of each flight map.

The vertical profiles of ozone concentration and temperature were determined during most of the flights, often at more than one location. Sites of vertical profiling are labeled along each flight path by the word "SPIRAL". The vertical ozone and temperature profiles are displayed in figures following each flight map. In cases where more than one spiral was carried out during any one flight, the starting time of the spiral (marked on each vertical profile) and the direction of flight (from Simsbury) will serve to identify each spiral location, since the spirals were carried out sequentially along the flight path. All vertical profiles have been corrected for atmospheric density variations. Haze layers observed during vertical profiling are indicated at the approximate altitude on the vertical profile plots.

In the following set of figures, each flight path and the associated vertical profile plots are listed under the same figure number with a and b designations.

The results of all of the Battelle aircraft flights from the 1975 New England study are represented in Figures 46 through 89.

TABLE 42. FLIGHT LOG

Date	Time	Description	Flight No.
7/18/75	Evening	Normal Pattern	2
7/20/75	AM	Normal Pattern (abort due to weather)	3
7/21/75	Evening	Normal Pattern	4
7/22/75	AM	Long Island-NYC Flight	5
7/22/75	PM	Long Island-NYC Flight	6
7/23/75	AM	Normal Pattern	7
7/23/75	PM	Normal Pattern	8
7/24/75	AM	Normal Pattern (abort due to weather)	9
7/24/75	PM	Atlantic Ocean Flight	10
7/26/75	AM	Normal Pattern	11
7/26/75	PM	Normal Pattern	12
7/27/75	AM	Normal Pattern	13
7/27/75	PM	Normal Pattern	14
7/28/75	AM	Hudson River	15
7/28/75	PM	Connecticut River-Two Altitudes	16
7/29/75	AM	Normal Pattern-Clockwise	17
7/29/75	PM	Normal Pattern-Clockwise	18
7/31/75	PM	Long Distance Flight to Ohio	19
8/3/75	PM	Long Distance Flight from Ohio	20
8/5/75	AM	Plume Tracking Flight	21
8/5/75	AM/PM	Special Study-NYC Circle	22
8/5/75	Evening	Normal Pattern	23
8/6/75	AM	Ocean Flight-NYC Urban Plume	24
8/9/75	AM	Power Plant Plumes	25
8/9/75	AM	Long Island Flight	26
8/9/75	PM	Urban Plume-NYC	27
8/10/75	AM	Cross-Sectional Pattern	28
8/10/75	PM	Cross-Sectional Pattern	29
8/11/75	AM	Cross-Sectional Pattern (aborted)	20
8/12/75	AM	Aircraft Calibration Test-18 mi. Boston DME	31

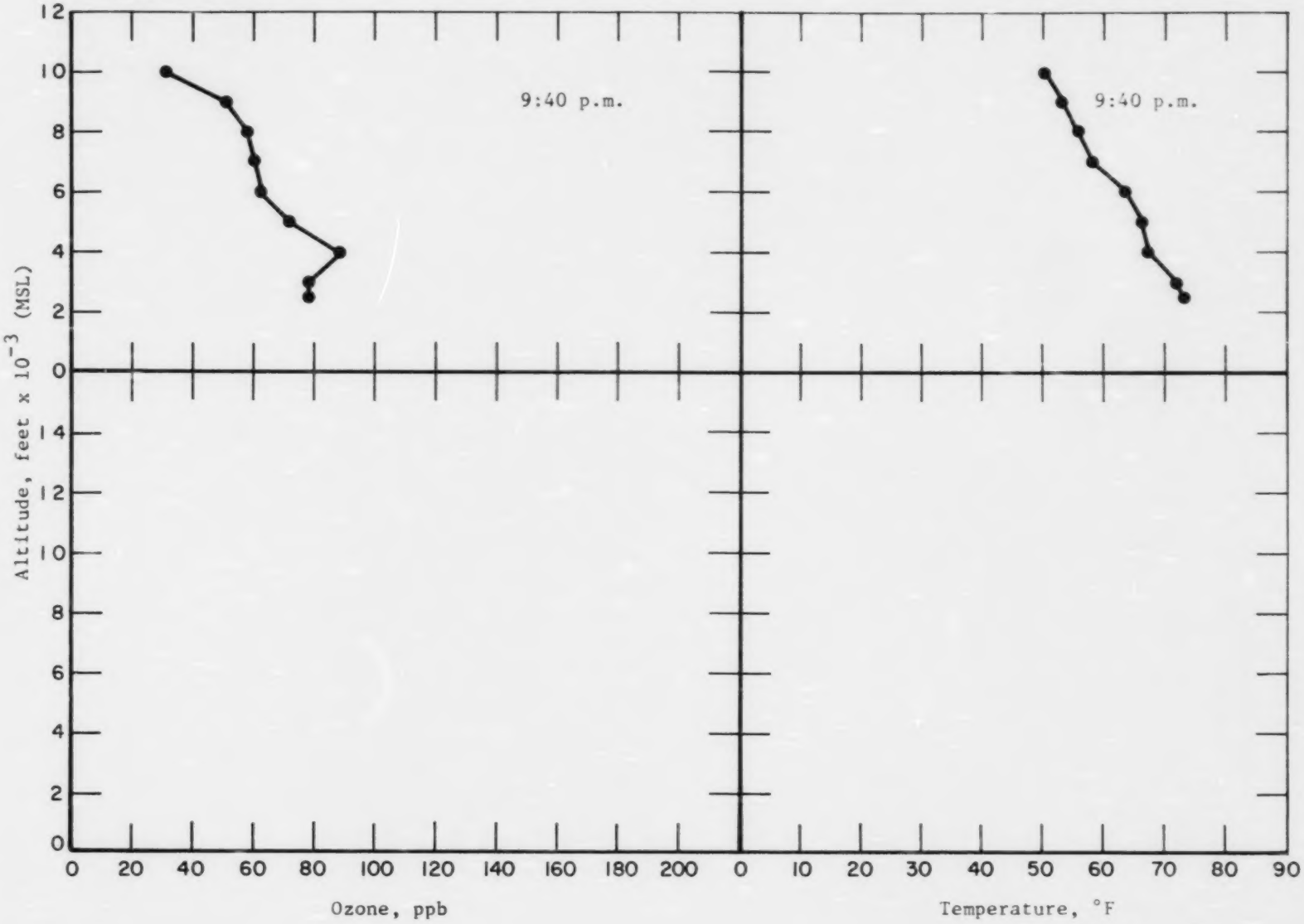
TABLE 42. CONTINUED

Date	Time	Description	Flight No.
8/13/75	AM	Western Butterfly Pattern	32
8/13/75	PM	Eastern Butterfly Pattern	33
8/14/75	AM	Western Butterfly Pattern	34
8/14/75	PM	Eastern Butterfly Pattern	35
8/15/75	AM	Cross-Sectional Pattern	36
8/18/75	AM	Western Butterfly Pattern (abort-weather)	37
8/18/75	AM/PM	Western Butterfly Pattern	38
8/18/75	Evening	Boston Urban Plume	39
8/19/75	AM	High-Pressure Tracking	40
8/19/75	PM	High-Pressure Tracking	41
8/20/75	AM	High-Pressure Tracking	42
8/20/75	PM	High-Pressure Tracking	43
8/21/75	AM	NYC Plume Study	44
8/21/75	PM	NYC Plume Study	45

FIGURE 46a.

Friday - 7/18/75
Evening Flight - 7:40-10:30
Ozone Concentration in ppb

FIGURE 46b. Vertical Profiles July 18, 1975



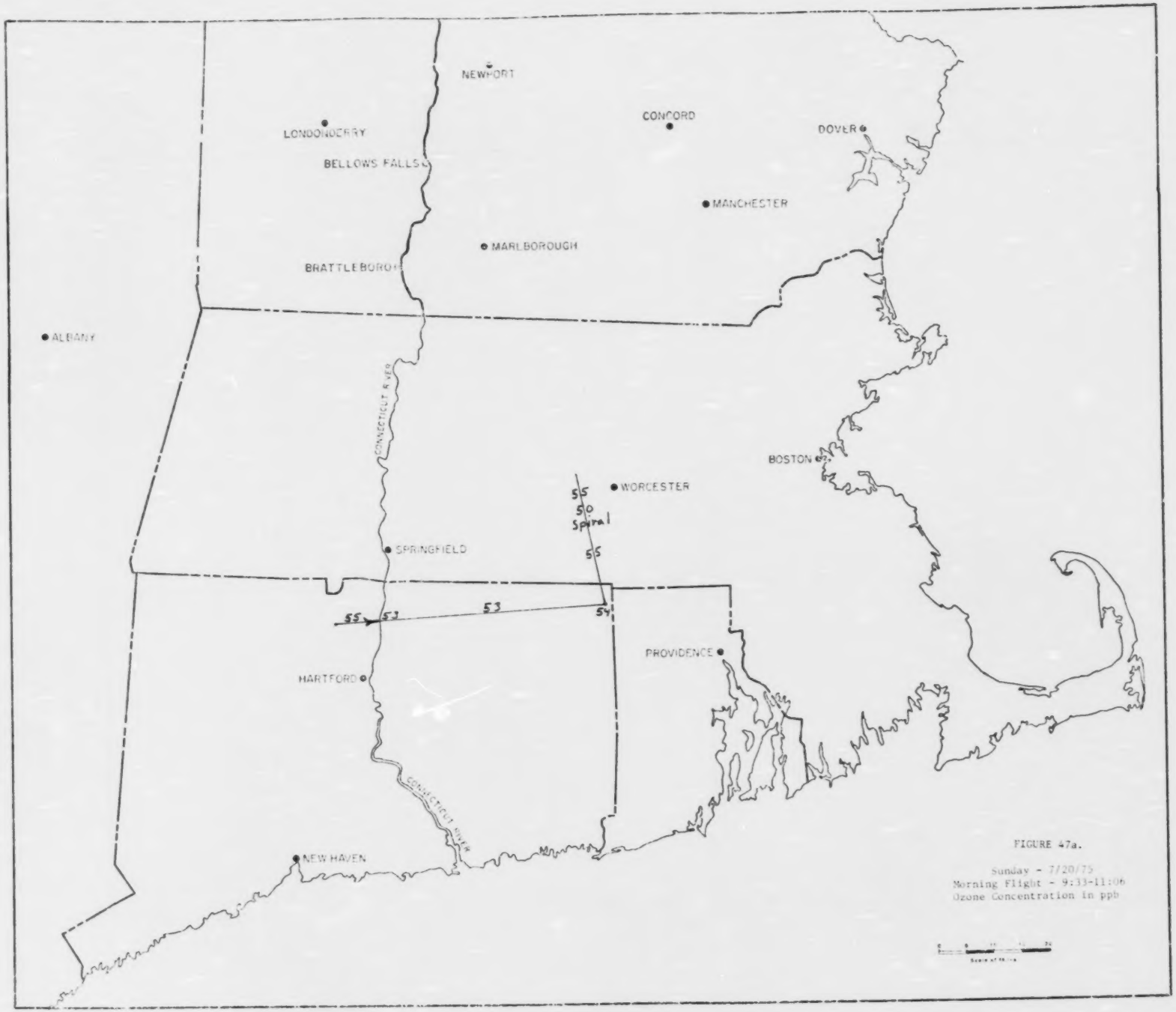
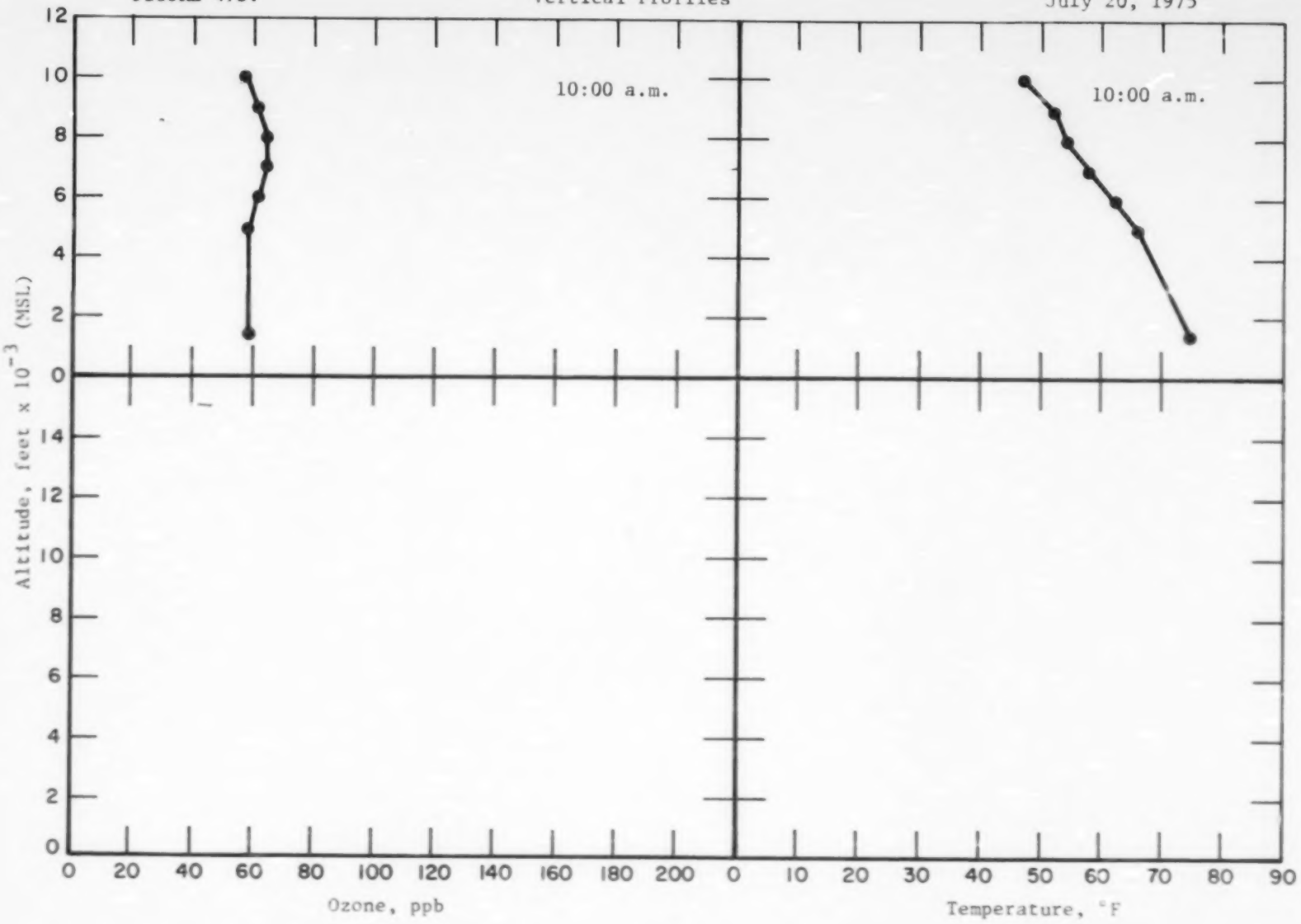


FIGURE 47a.

Sunday - 7/20/75
Morning Flight - 9:33-11:06
Ozone Concentration in ppb

FIGURE 47b. Vertical Profiles July 20, 1975



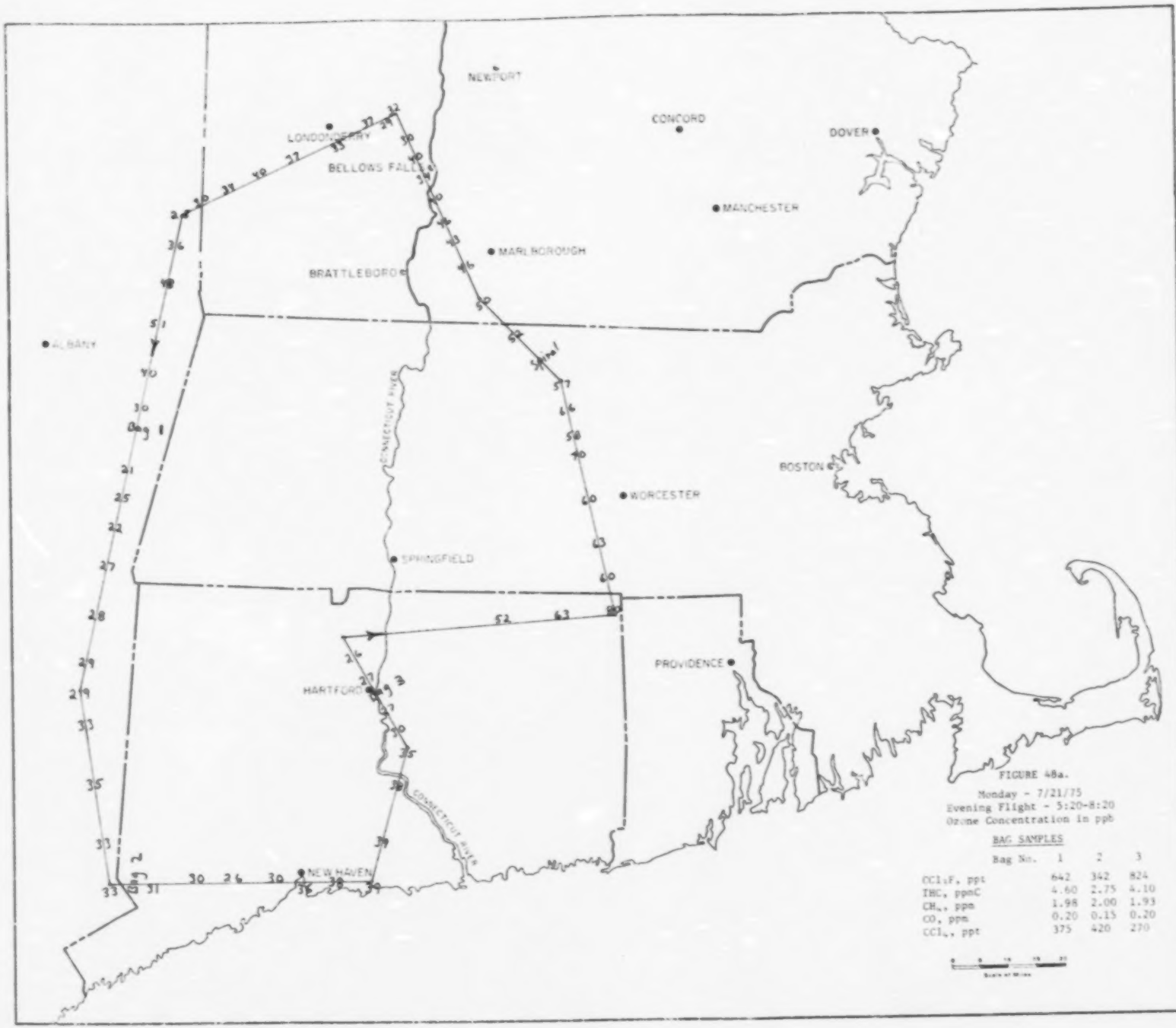


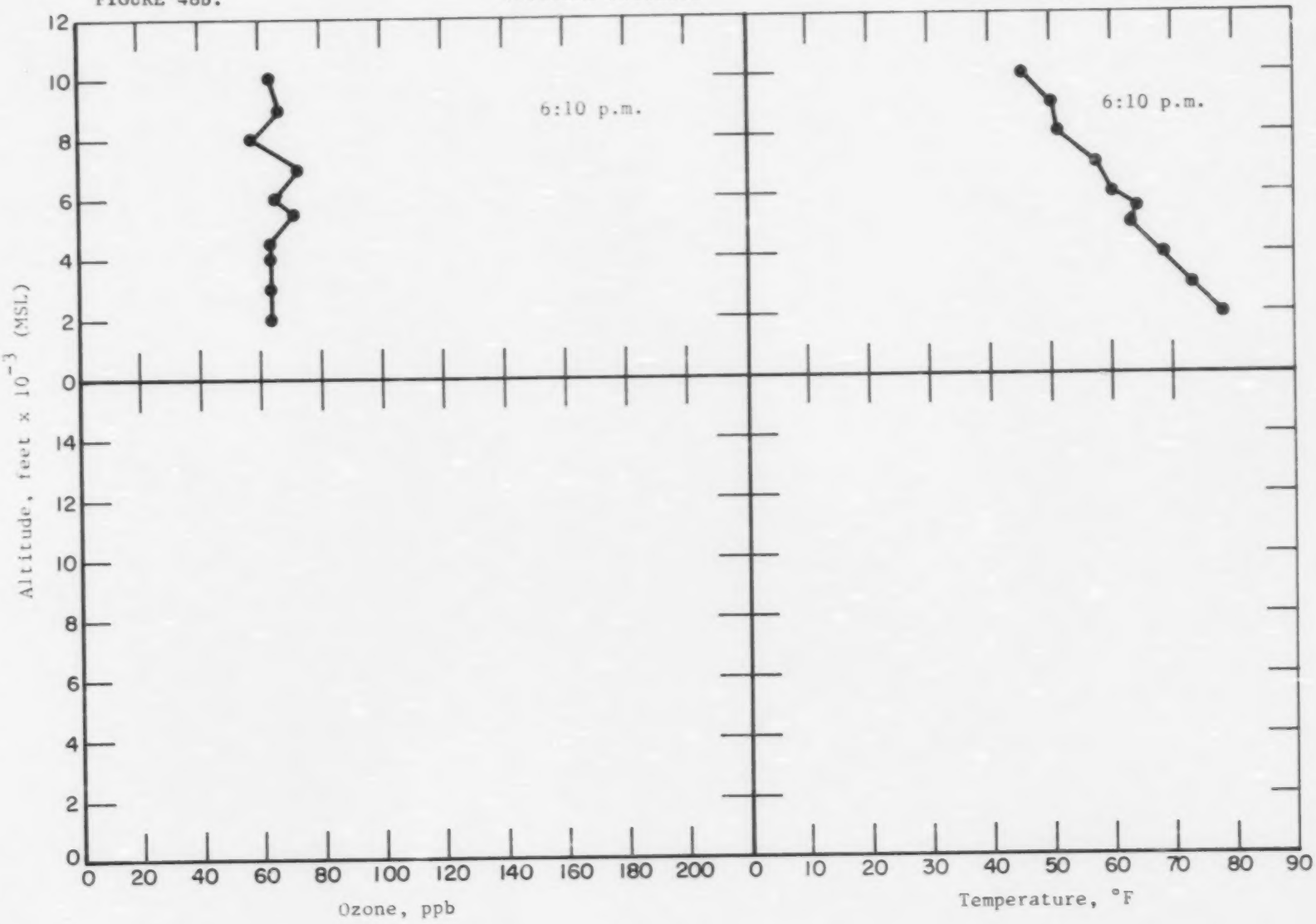
FIGURE 48a.

Monday - 7/21/75
Evening Flight - 5:20-8:20
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	642	342	824
THC, ppmC	4.60	2.75	4.10
CH_4, ppm	1.98	2.00	1.93
CO, ppm	0.20	0.15	0.20
CCl_4, ppt	375	420	270

FIGURE 48b. Vertical Profiles July 21, 1975



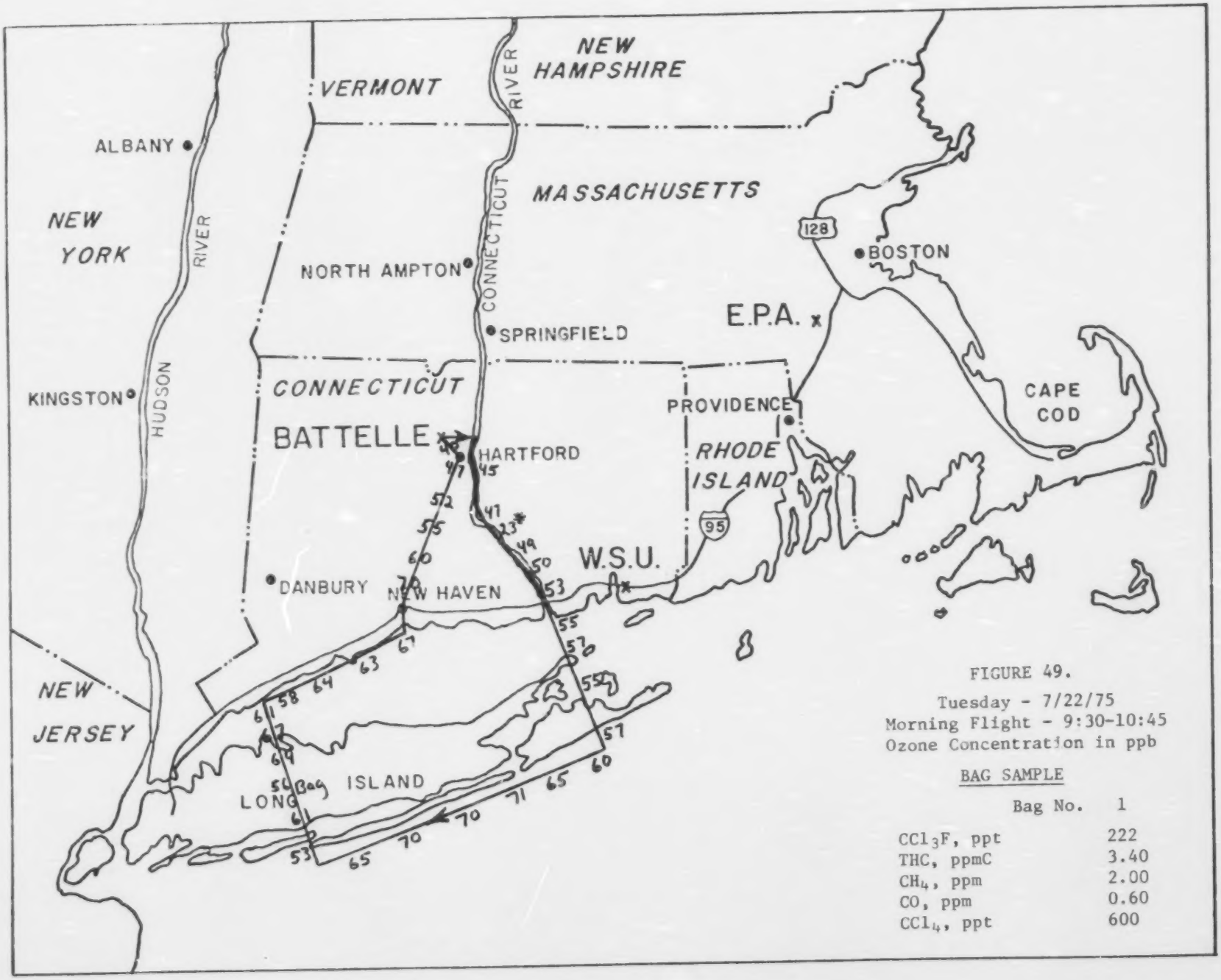


FIGURE 49.

Tuesday - 7/22/75
Morning Flight - 9:30-10:45
Ozone Concentration in ppb

BAG SAMPLE

Bag No.	1
CCl_3F, ppt	222
THC, ppmC	3.40
CH_4, ppm	2.00
CO, ppm	0.60
CCl_4, ppt	600

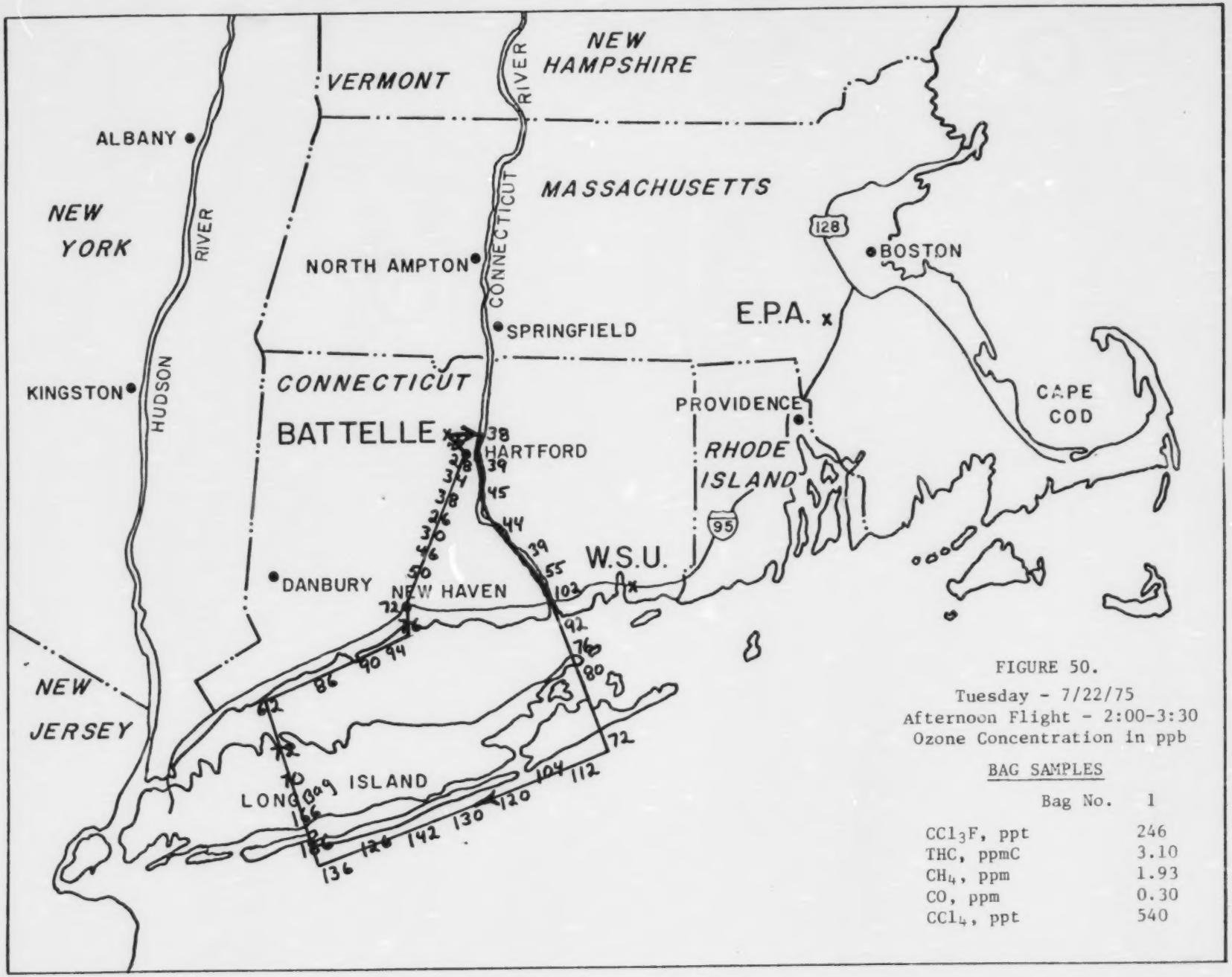


FIGURE 50.

Tuesday - 7/22/75
Afternoon Flight - 2:00-3:30
Ozone Concentration in ppb

BAG SAMPLES

	Bag No. 1
CCl_3F, ppt	246
THC, ppmC	3.10
CH_4, ppm	1.93
CO, ppm	0.30
CCl_4, ppt	540

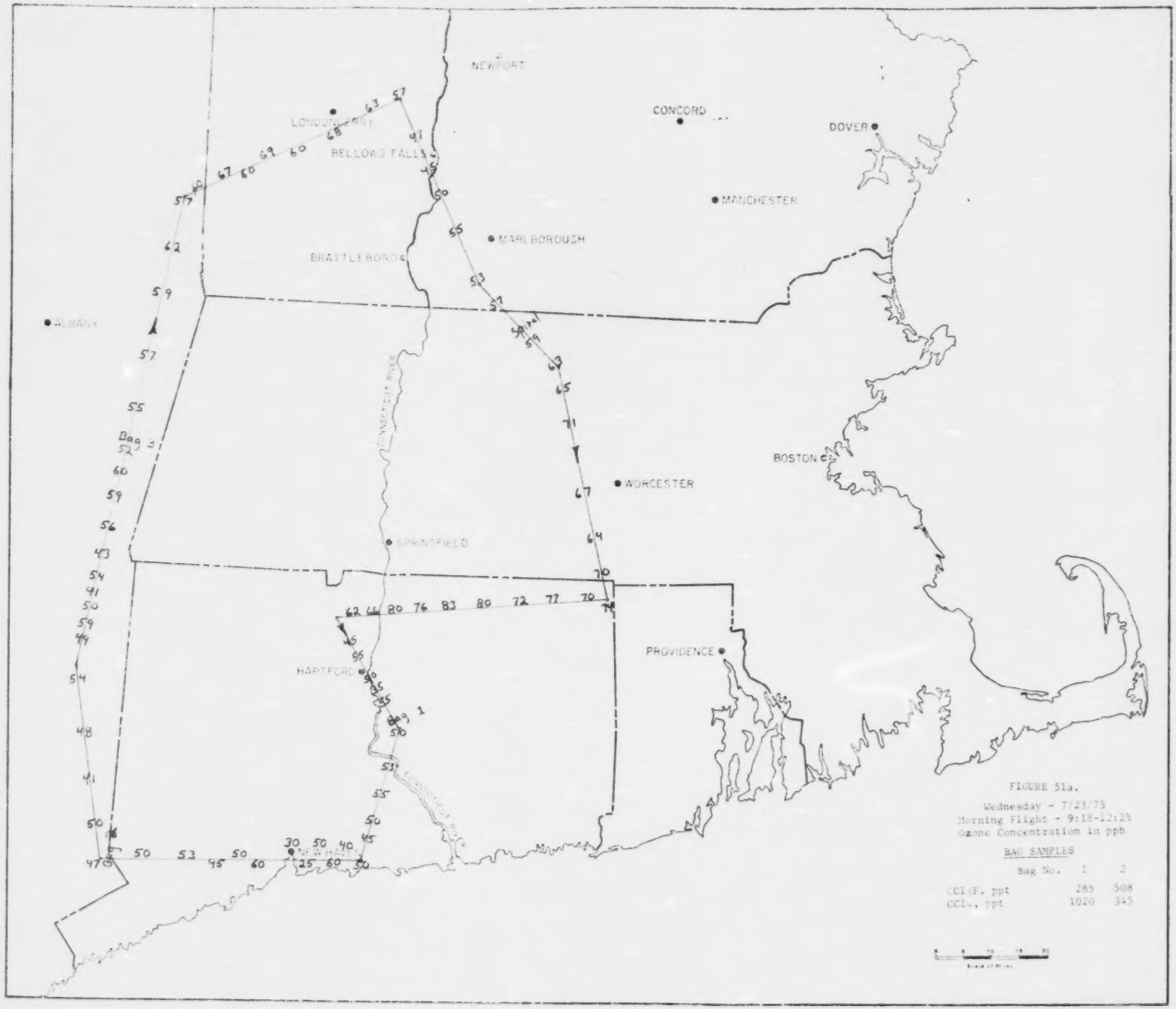


FIGURE 51a.

Wednesday - 7/23/75
Morning Flight - 9:18-12:25
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	285	508
CCl_4, ppt	1020	345

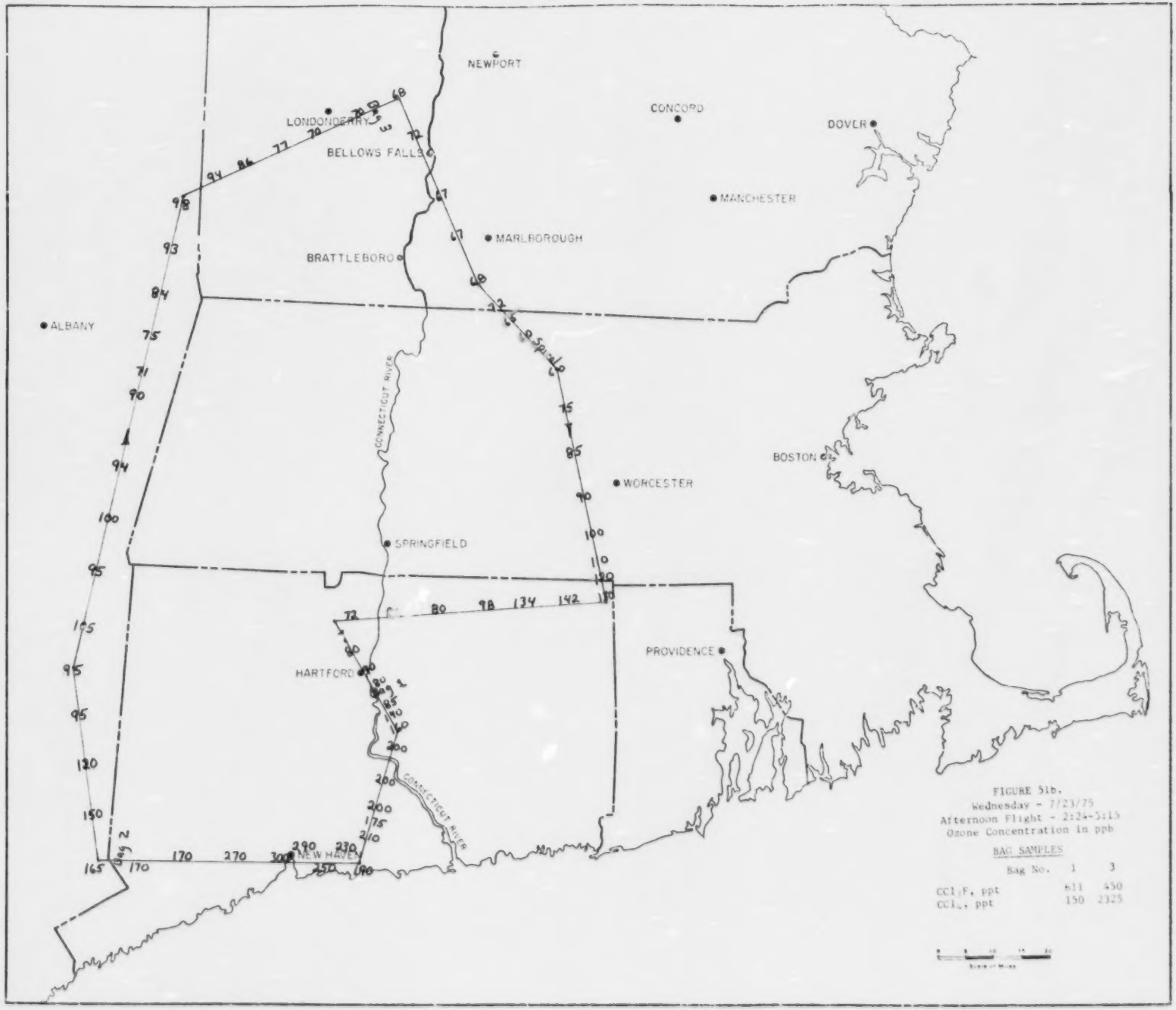
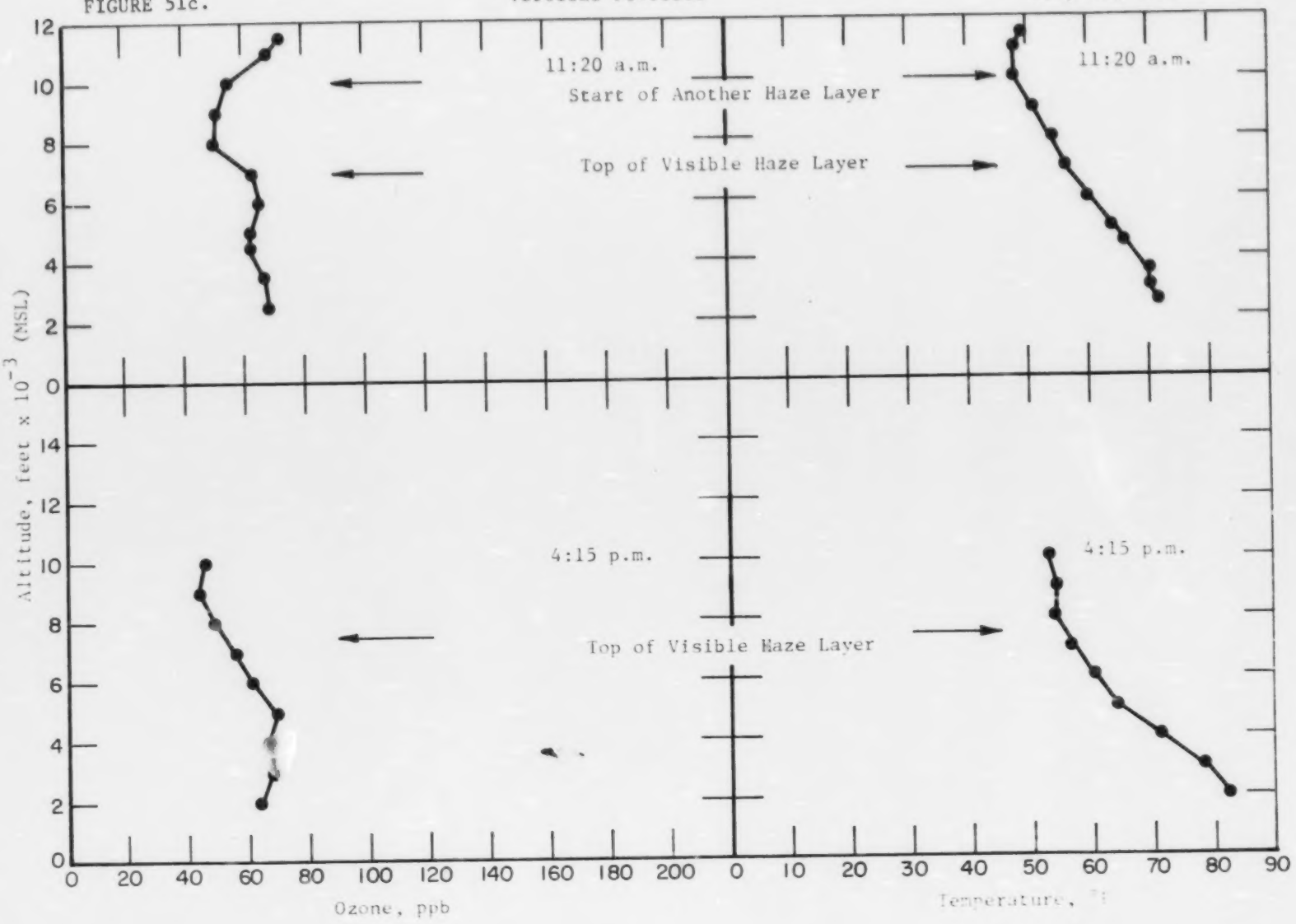


FIGURE 51b.
Wednesday - 7/23/75
Afternoon Flight - 2:24-5:15
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	3
CCl_3F, ppt	611	450
CCl_4, ppt	130	2325

FIGURE 51c. Vertical Profiles July 23, 1975



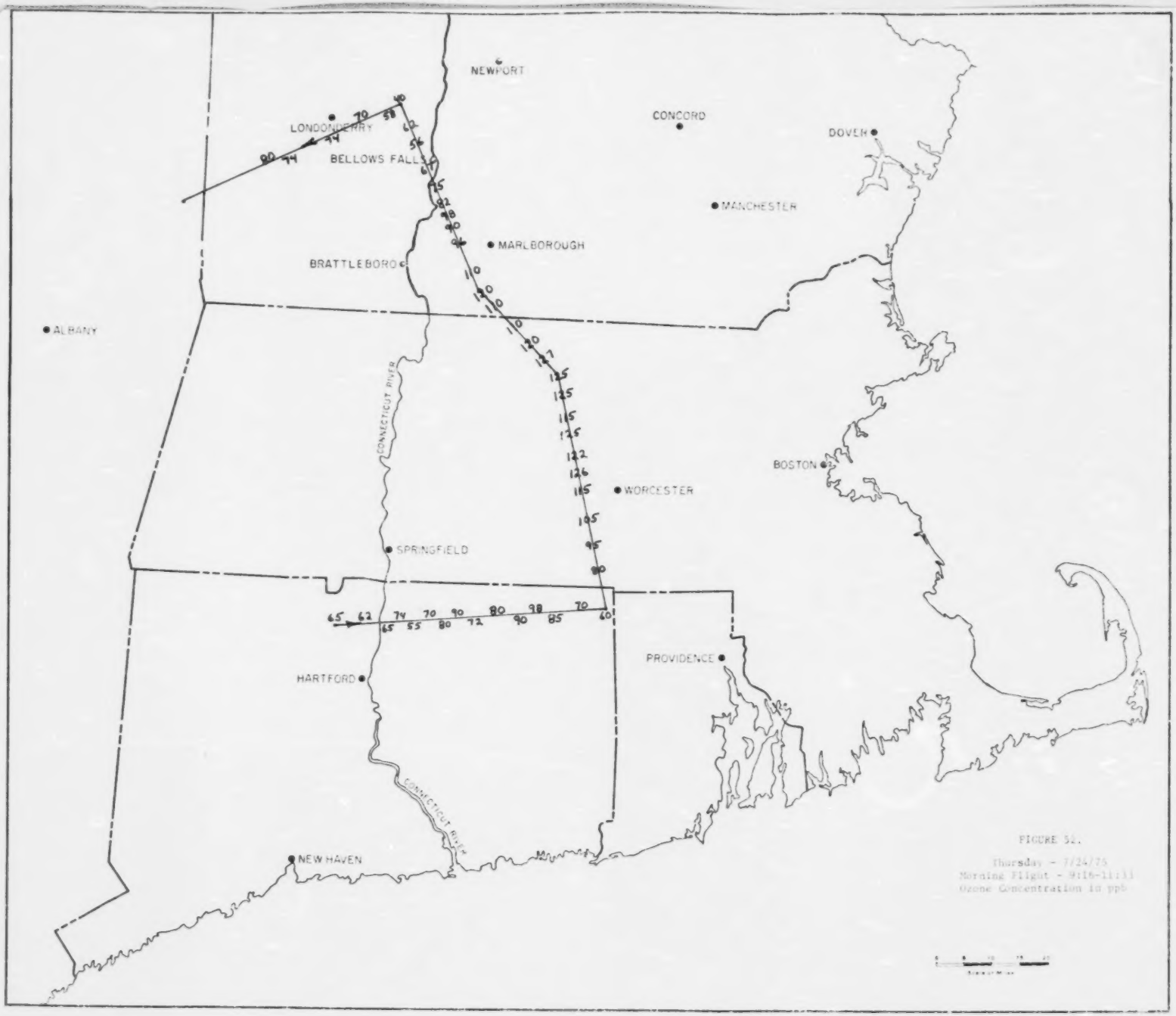


FIGURE 52.

Thursday - 7/24/75
Morning Flight - 9:16-11:11
Ozone Concentration in ppb

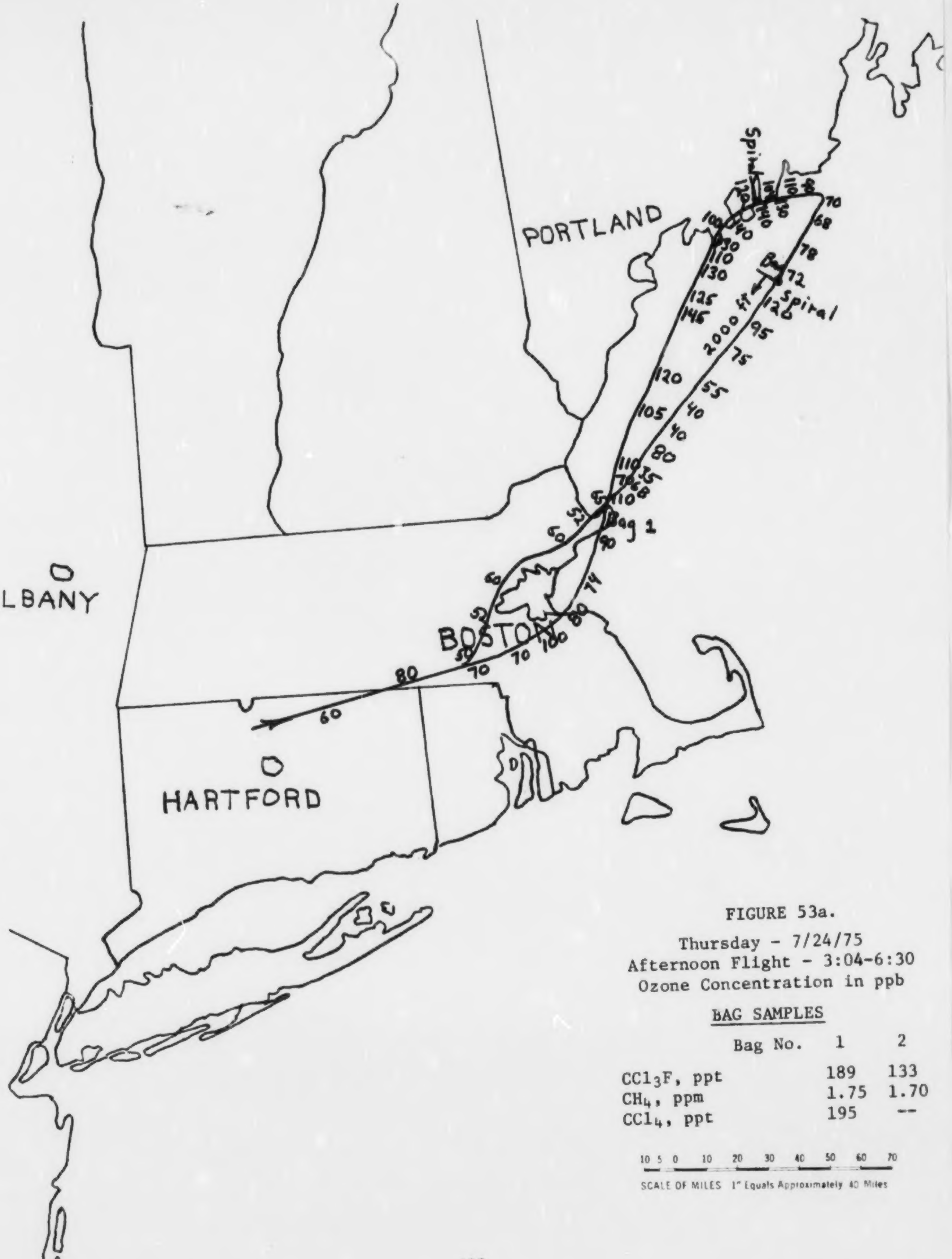


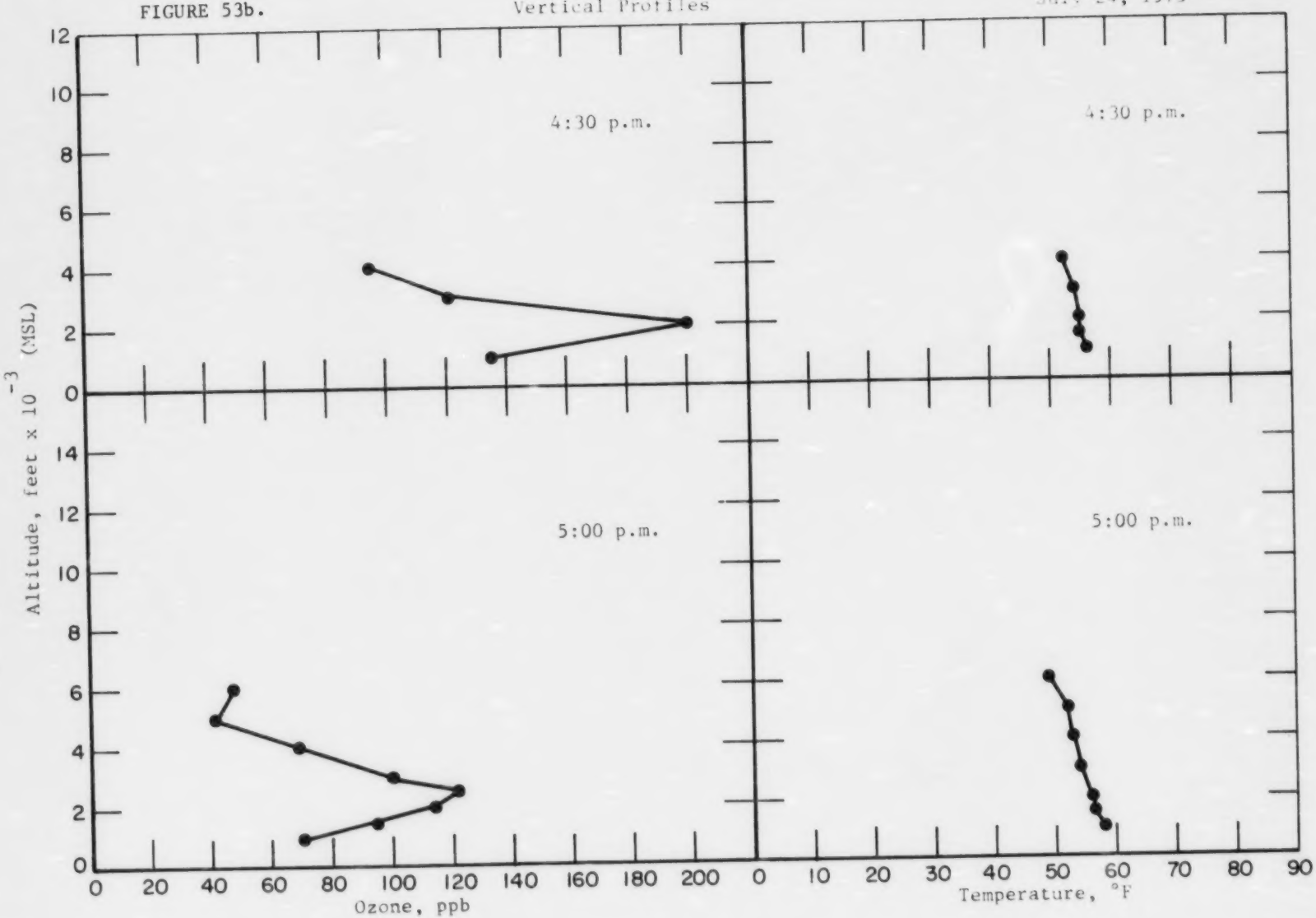
FIGURE 53a.

Thursday - 7/24/75
Afternoon Flight - 3:04-6:30
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	189	133
CH_4, ppm	1.75	1.70
CCl_4, ppt	195	--

FIGURE 53b. Vertical Profiles July 24, 1975



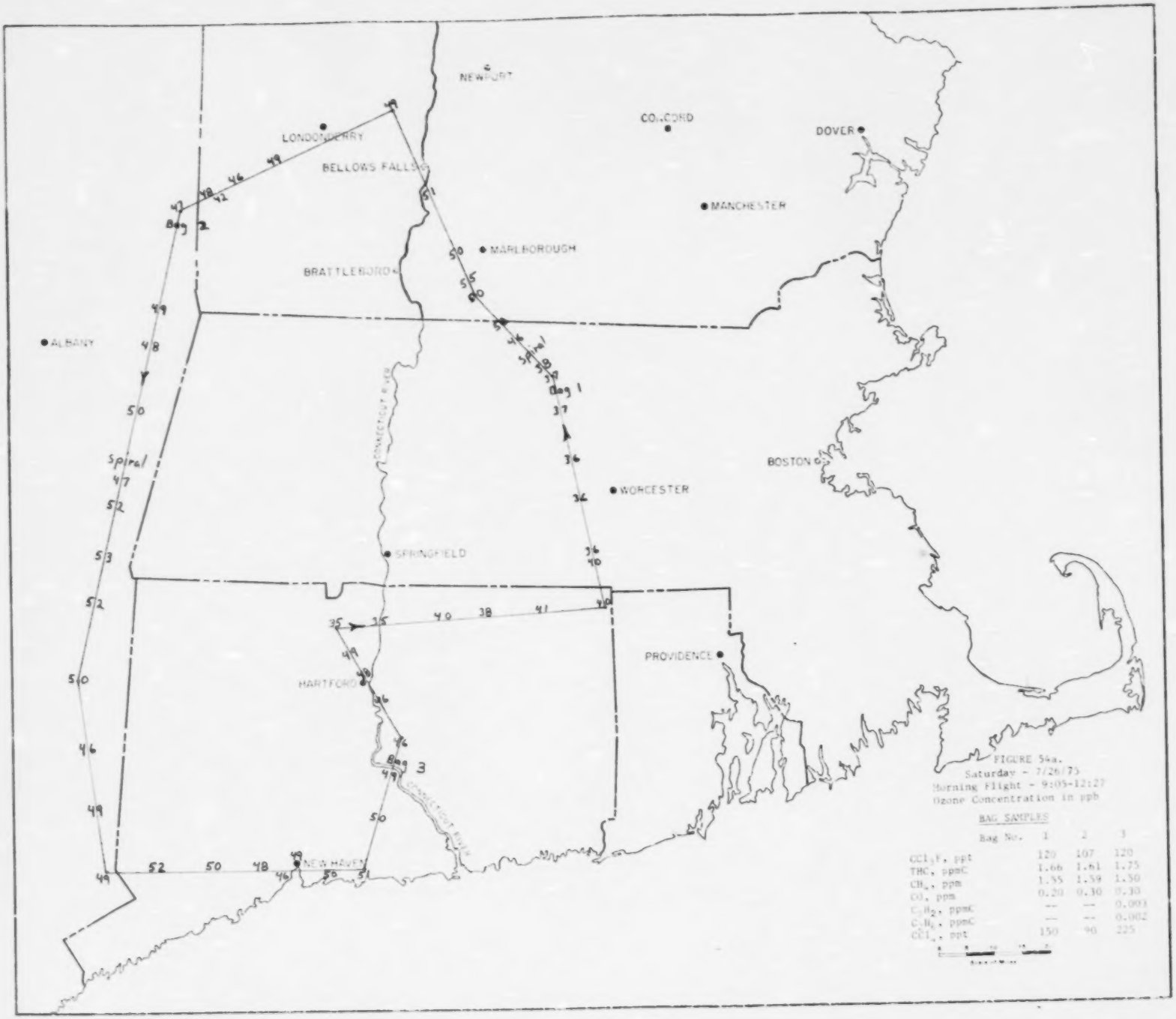
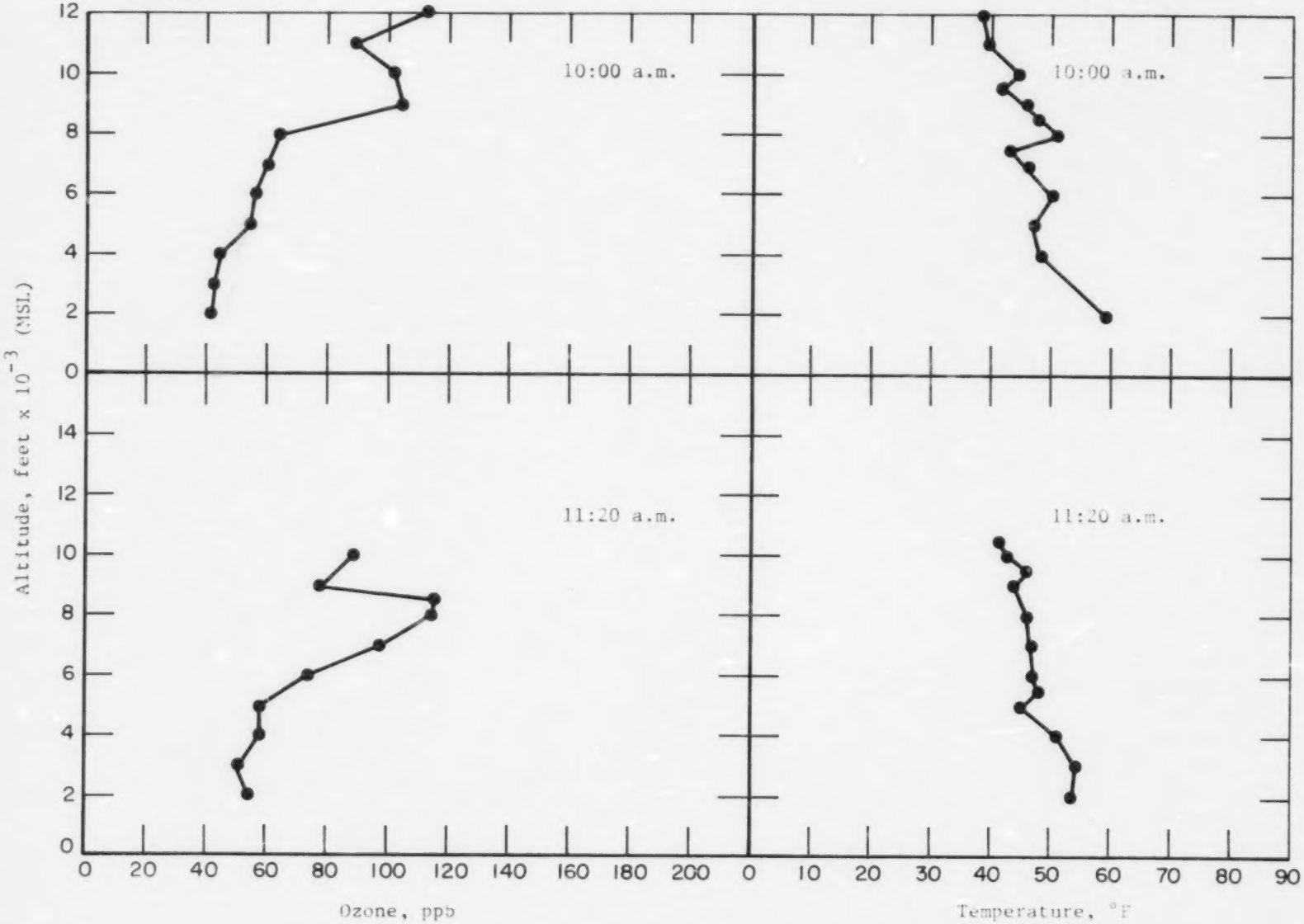


FIGURE 54a.
Saturday - 7/26/75
Morning Flight - 9:05-12:27
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	120	107	120
THC, ppmC	1.66	1.61	1.75
CH_4, ppm	1.55	1.59	1.50
CO, ppm	0.20	0.30	0.30
C_2H_2, ppmC	—	—	0.001
C_2H_6, ppmC	—	—	0.002
CCl_4, ppt	150	90	225

FIGURE 54b. Vertical Profiles July 26, 1975



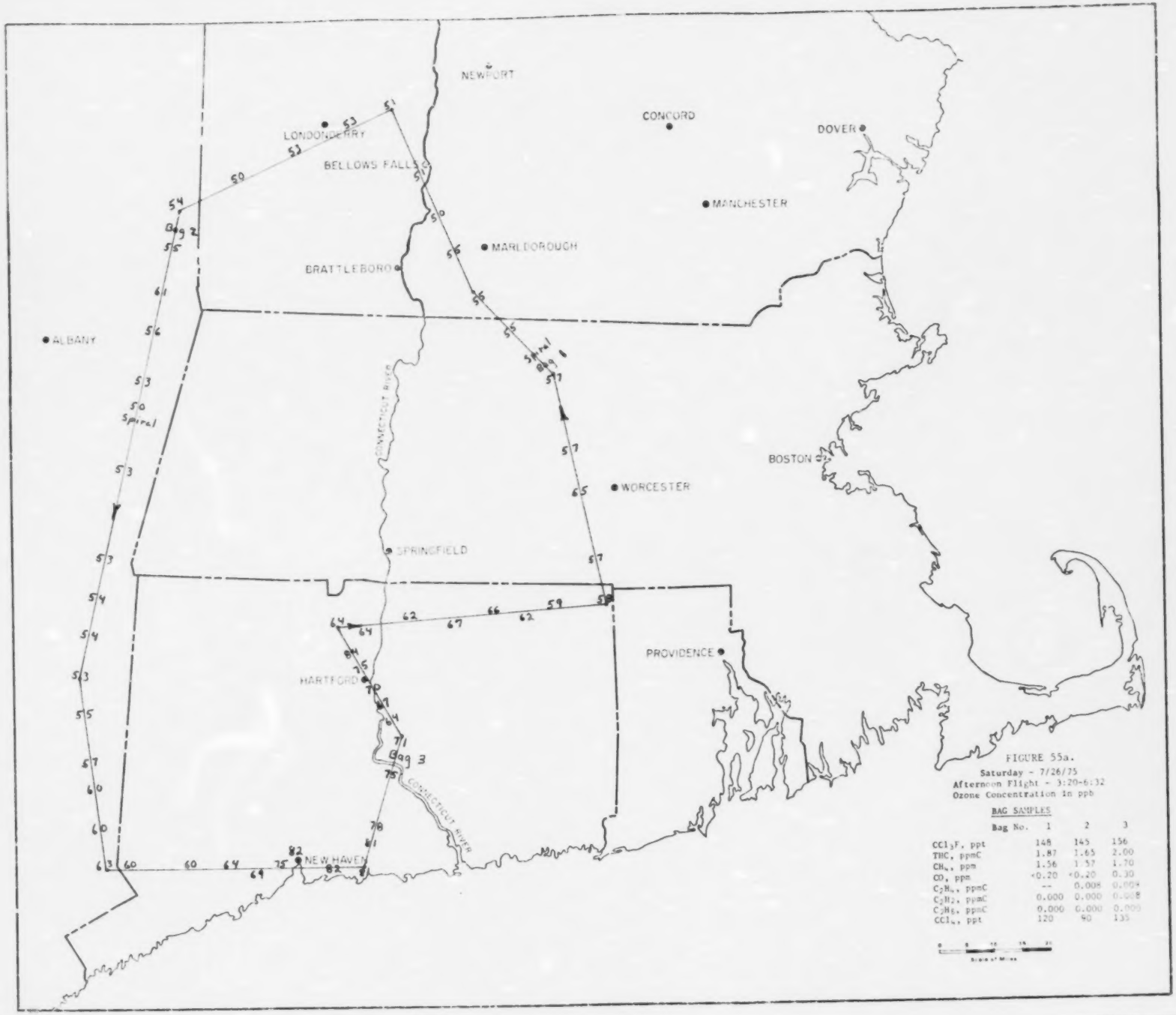
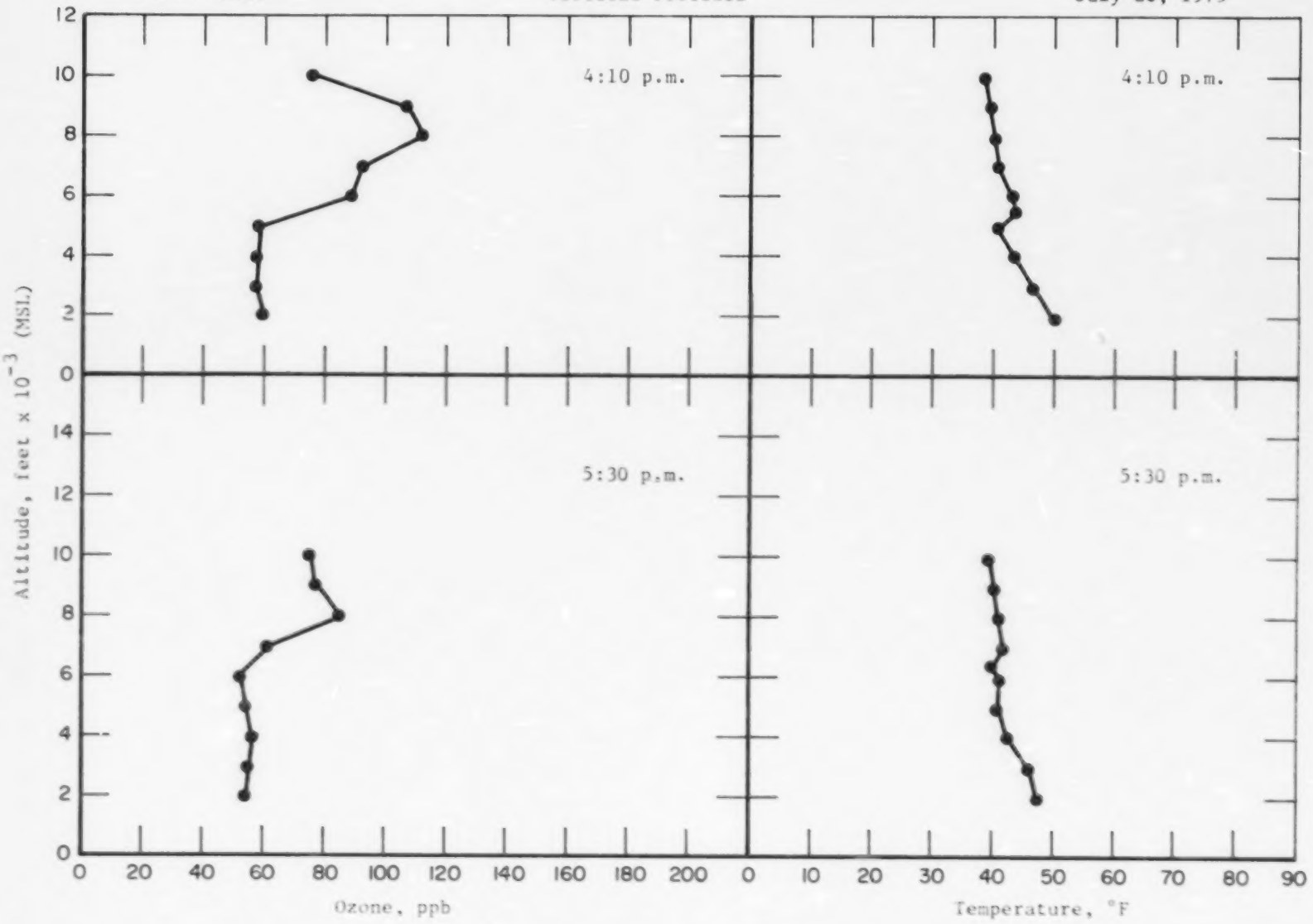


FIGURE 55a.
Saturday - 7/26/75
Afternoon Flight - 3:20-6:32
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	148	145	156
THC, ppmC	1.87	1.65	2.00
CH_4, ppm	1.56	1.57	1.70
CO, ppm	<0.20	<0.20	0.30
C_2H_4, ppmC	--	0.008	0.004
C_2H_2, ppmC	0.000	0.000	0.008
C_2H_6, ppmC	0.000	0.000	0.000
CCl_4, ppt	120	90	135

FIGURE 55b. Vertical Profiles July 26, 1975



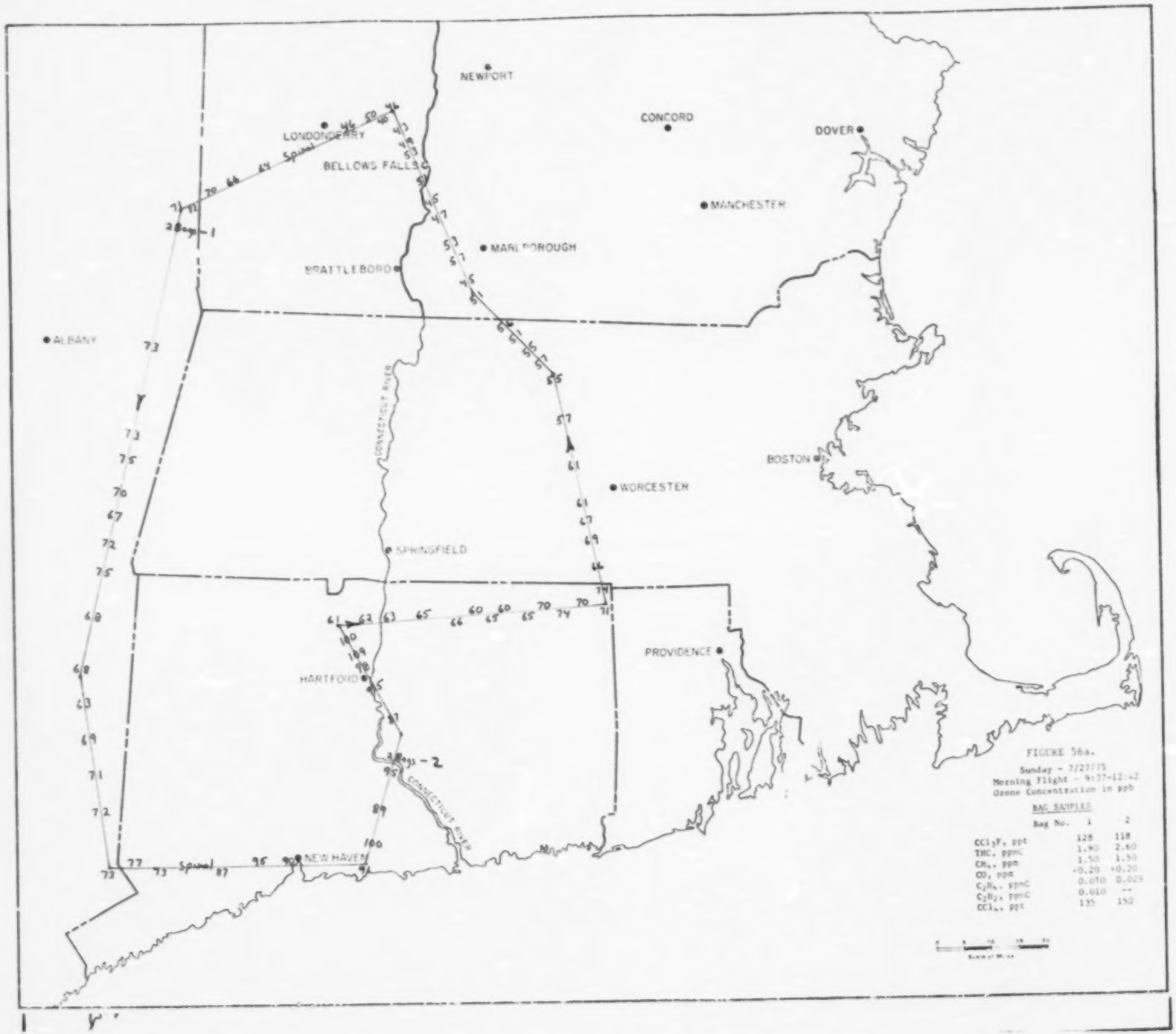


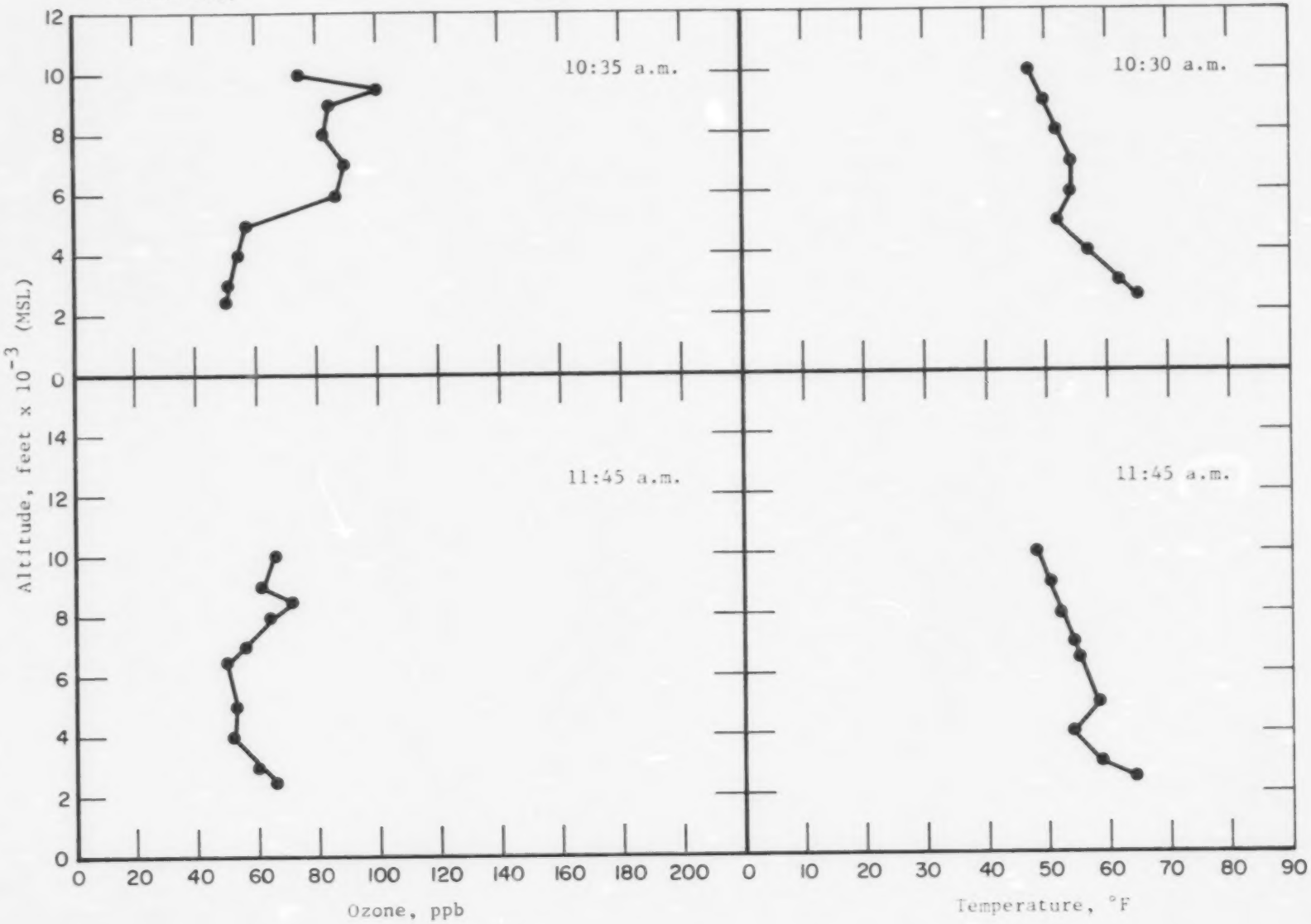
FIGURE 56a.

Sunday - 7/27/75
Morning Flight - 9:37-12:42
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	128	118
THC, ppmC	1.90	2.60
CH_4, ppm	1.50	1.50
CO, ppm	+0.20	+0.20
C_2H_2, ppmC	0.010	0.029
C_2H_2, ppmC	0.010	--
CCl_4, ppt	135	150

FIGURE 56b. Vertical Profiles July 27, 1975



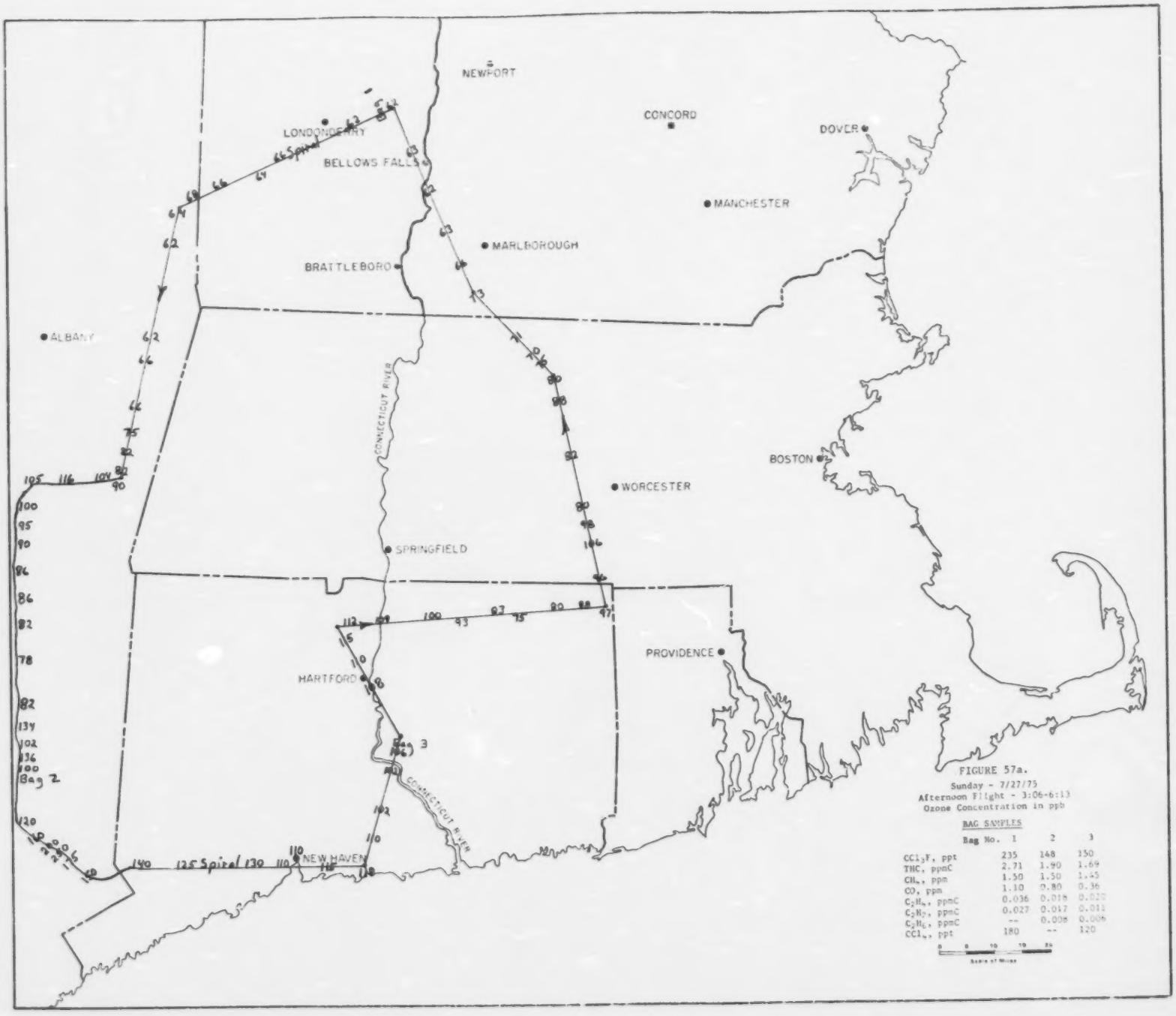


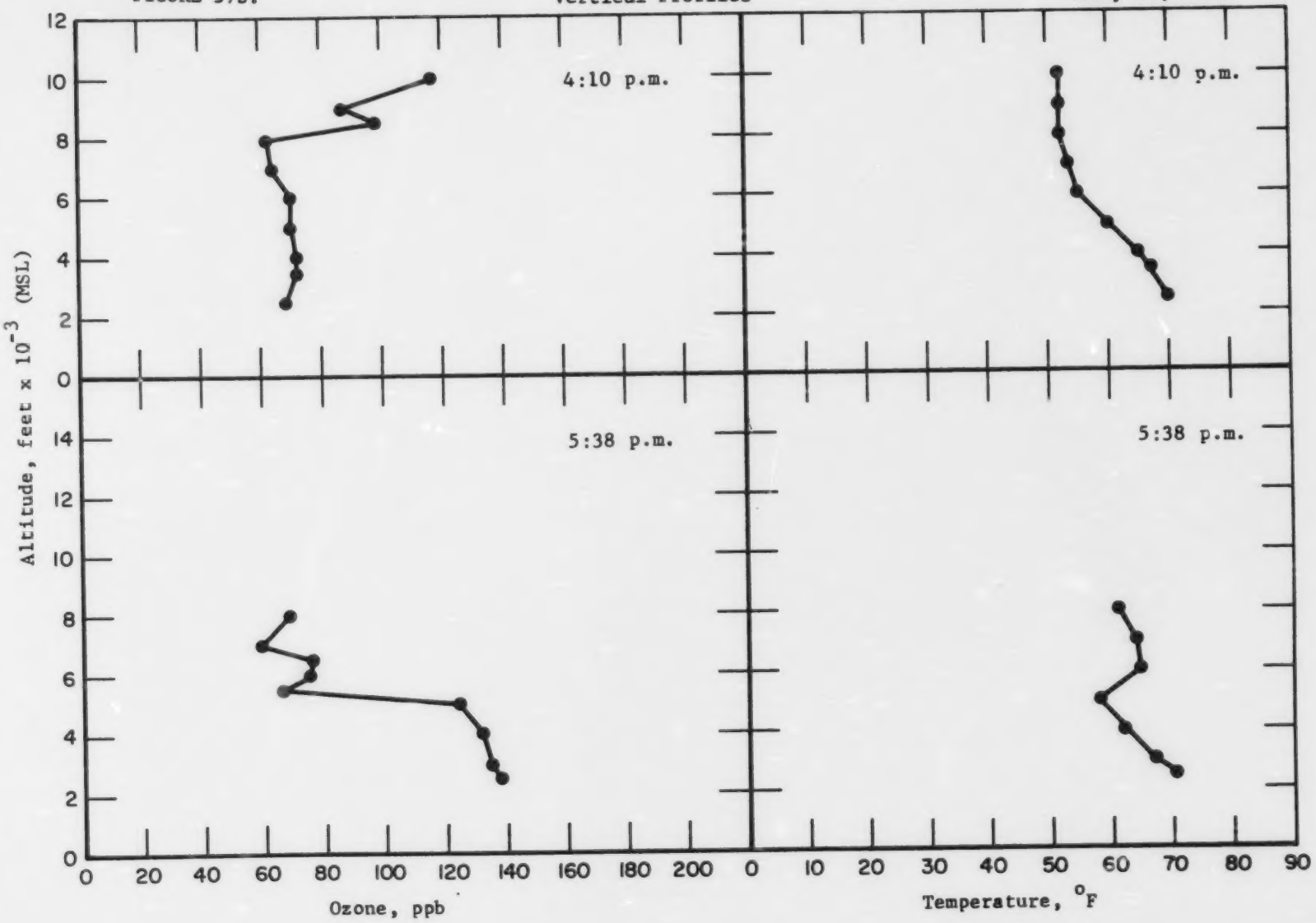
FIGURE 57a.

Sunday - 7/27/75
Afternoon Flight - 3:06-6:13
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	235	148	150
THC, ppmC	2.71	1.90	1.69
CH_4, ppm	1.50	1.50	1.45
CO, ppm	1.10	0.80	0.36
C_2H_4, ppmC	0.036	0.015	0.020
C_2H_2, ppmC	0.027	0.017	0.011
C_2H_6, ppmC	--	0.008	0.006
CCl_4, ppt	180	--	120

FIGURE 57b. Vertical Profiles July 27, 1975



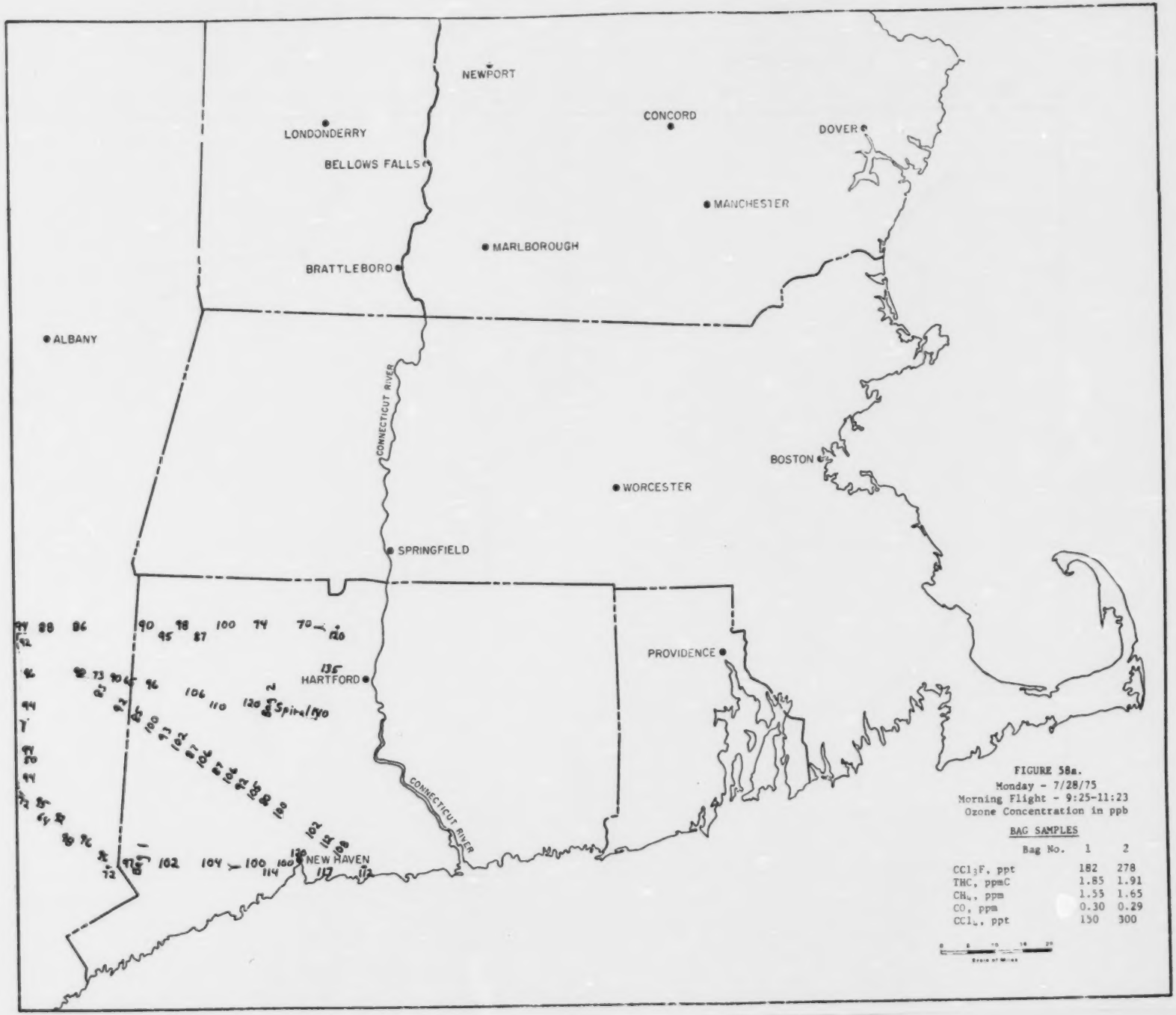
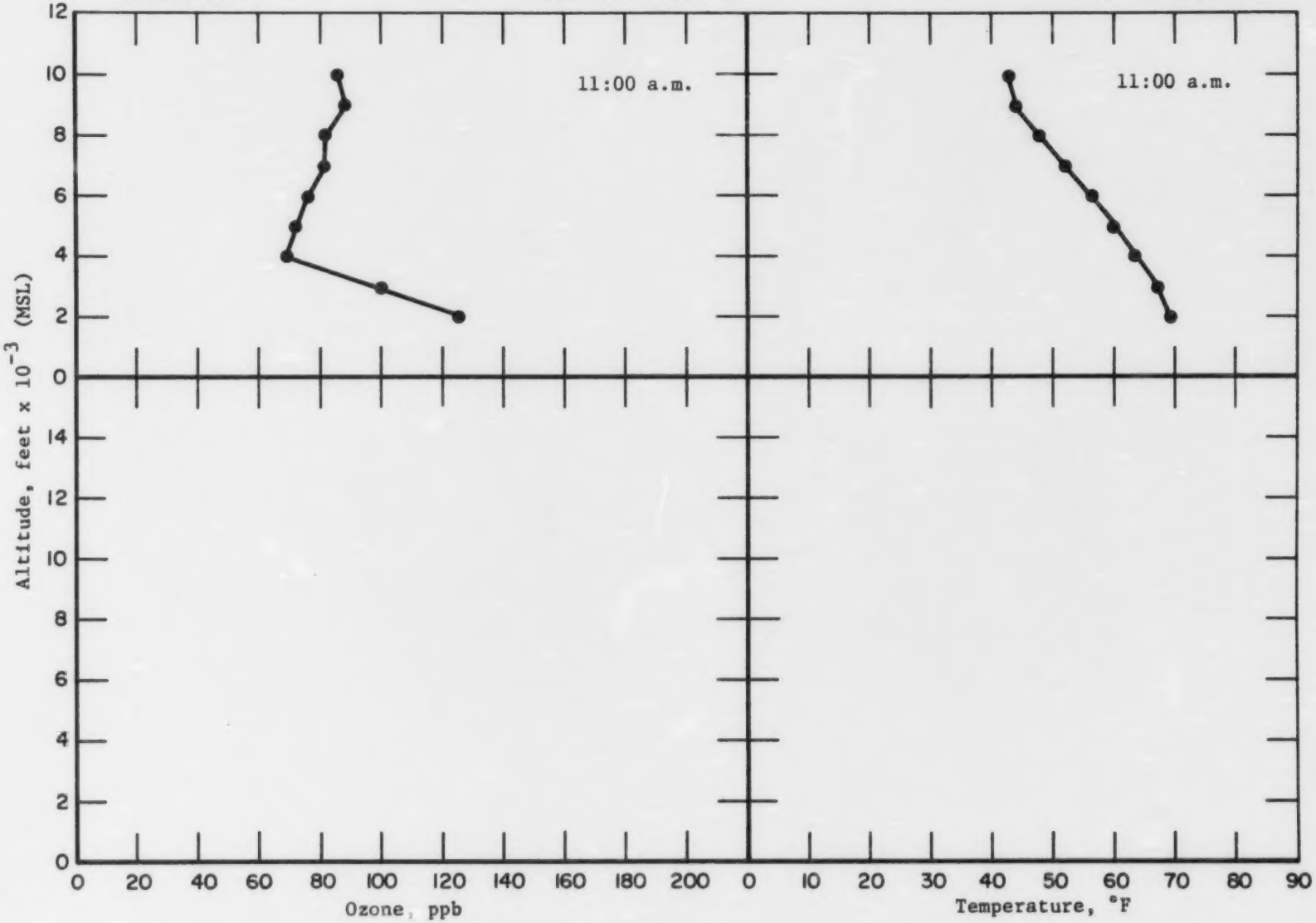


FIGURE 58a.
Monday - 7/28/75
Morning Flight - 9:25-11:23
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	182	278
THC, ppmC	1.85	1.91
CH_4, ppm	1.55	1.65
CO, ppm	0.30	0.29
CCl_4, ppt	130	300

FIGURE 58b. Vertical Profiles July 28, 1975



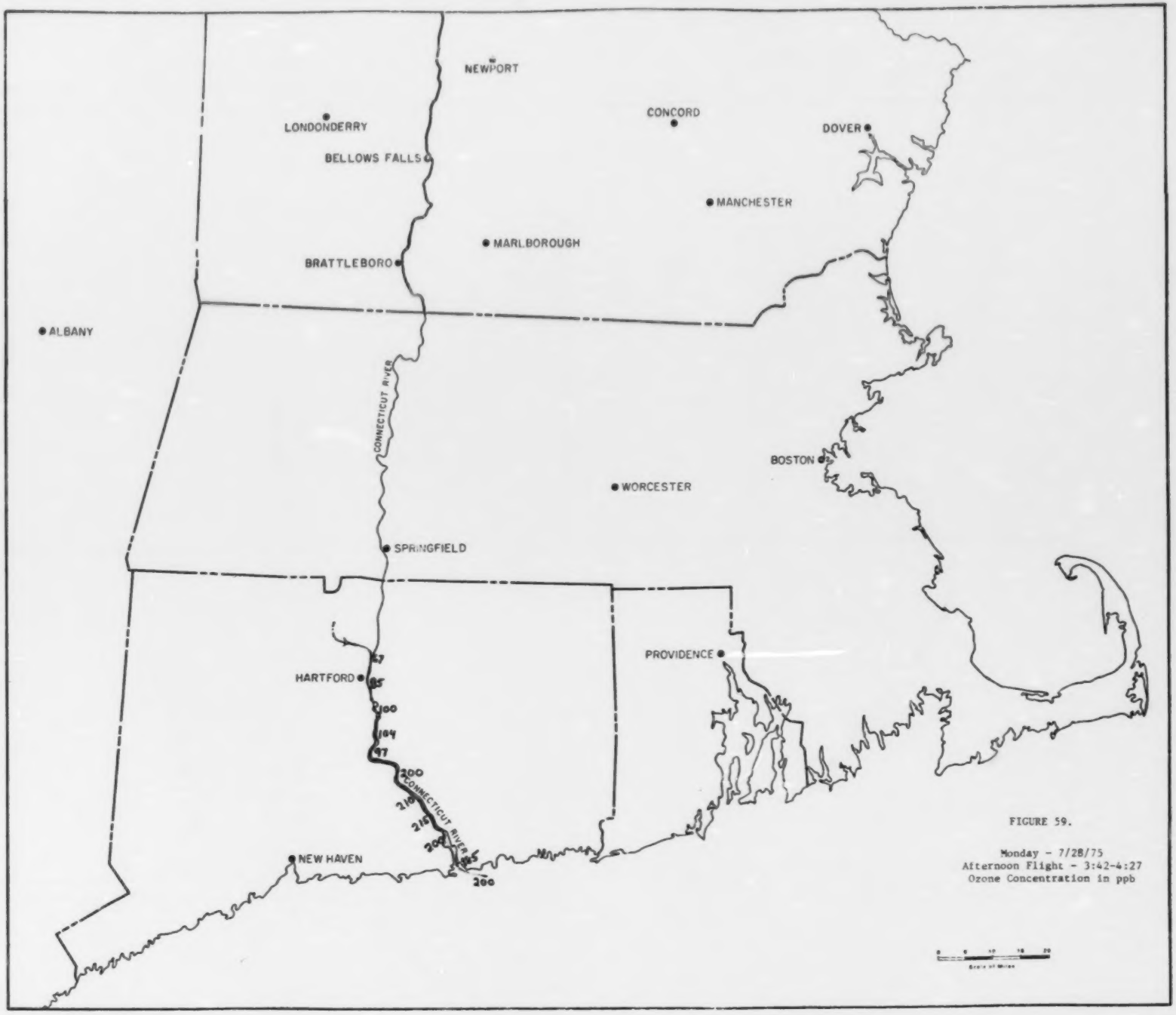


FIGURE 59.

Monday - 7/28/75
Afternoon Flight - 3:42-4:27
Ozone Concentration in ppb

FIGURE 60.

Monday - 7/28/75
Afternoon Flight - 3:42-4:27
Ozone Concentration in ppb

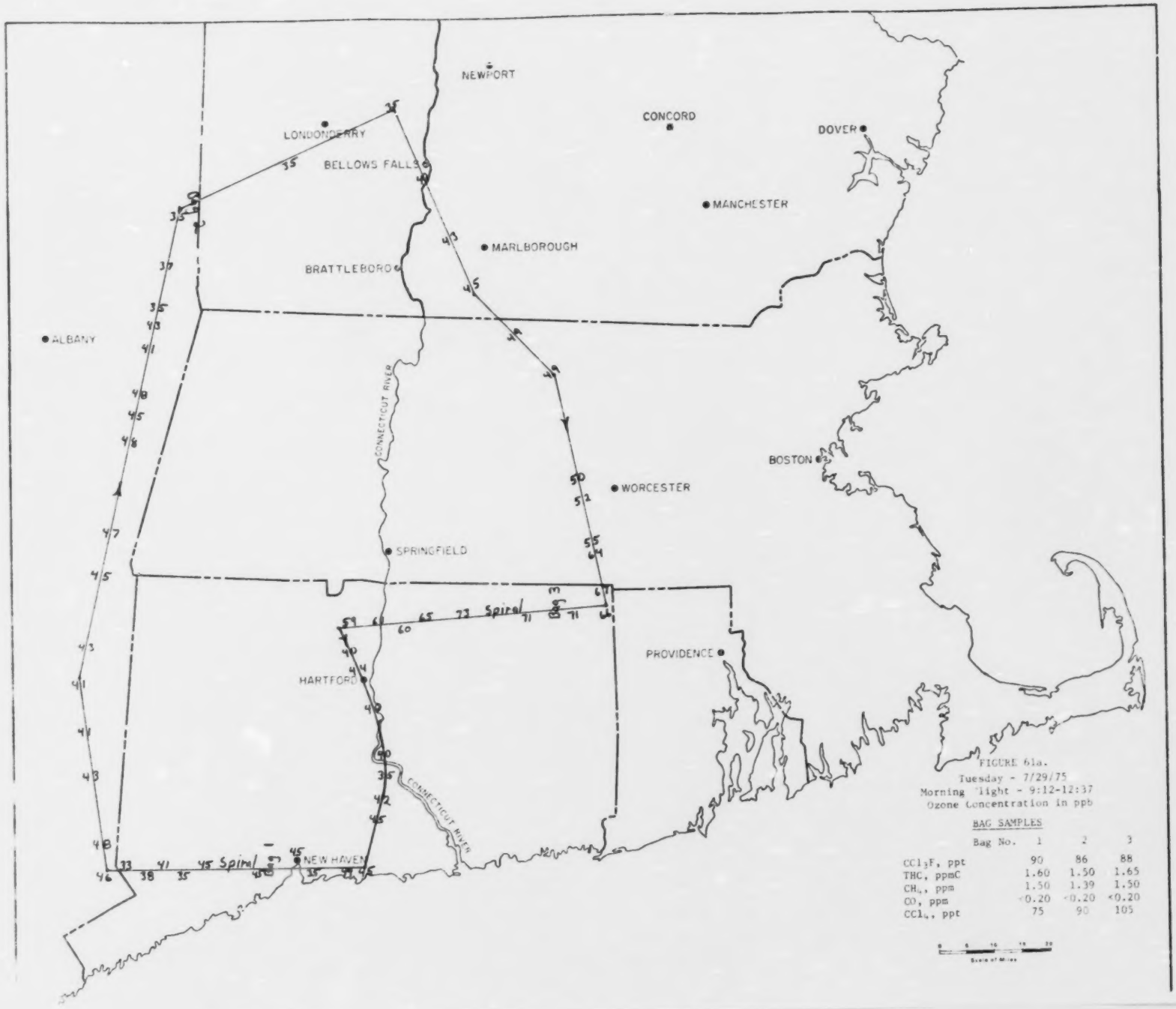
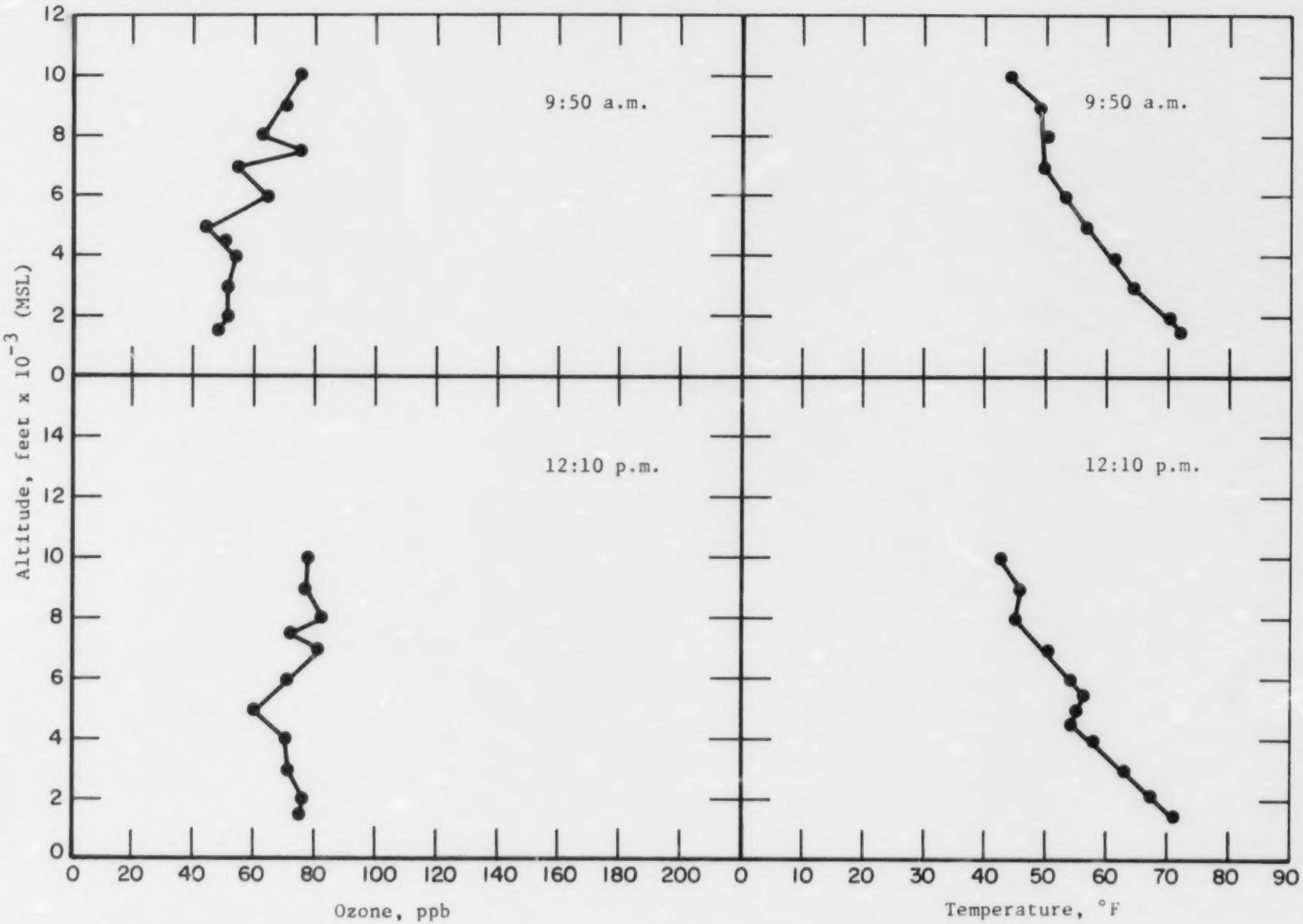


FIGURE 61a.
Tuesday - 7/29/75
Morning Flight - 9:12-12:37
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	90	86	88
THC, ppmC	1.60	1.50	1.65
CH_4, ppm	1.50	1.39	1.50
CO, ppm	<0.20	<0.20	<0.20
CCl_4, ppt	75	90	105

FIGURE 61b. Vertical Profiles July 29, 1975



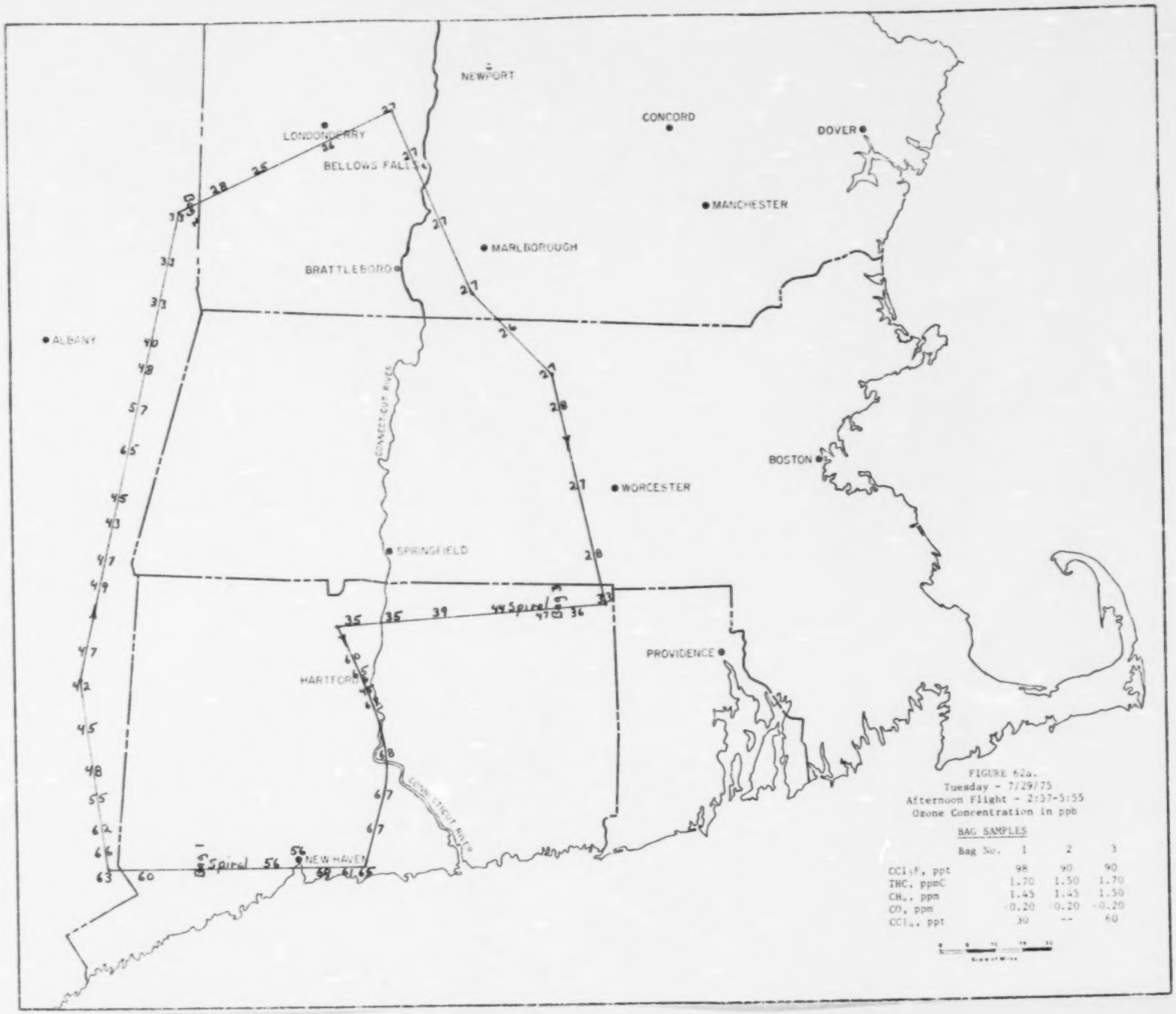
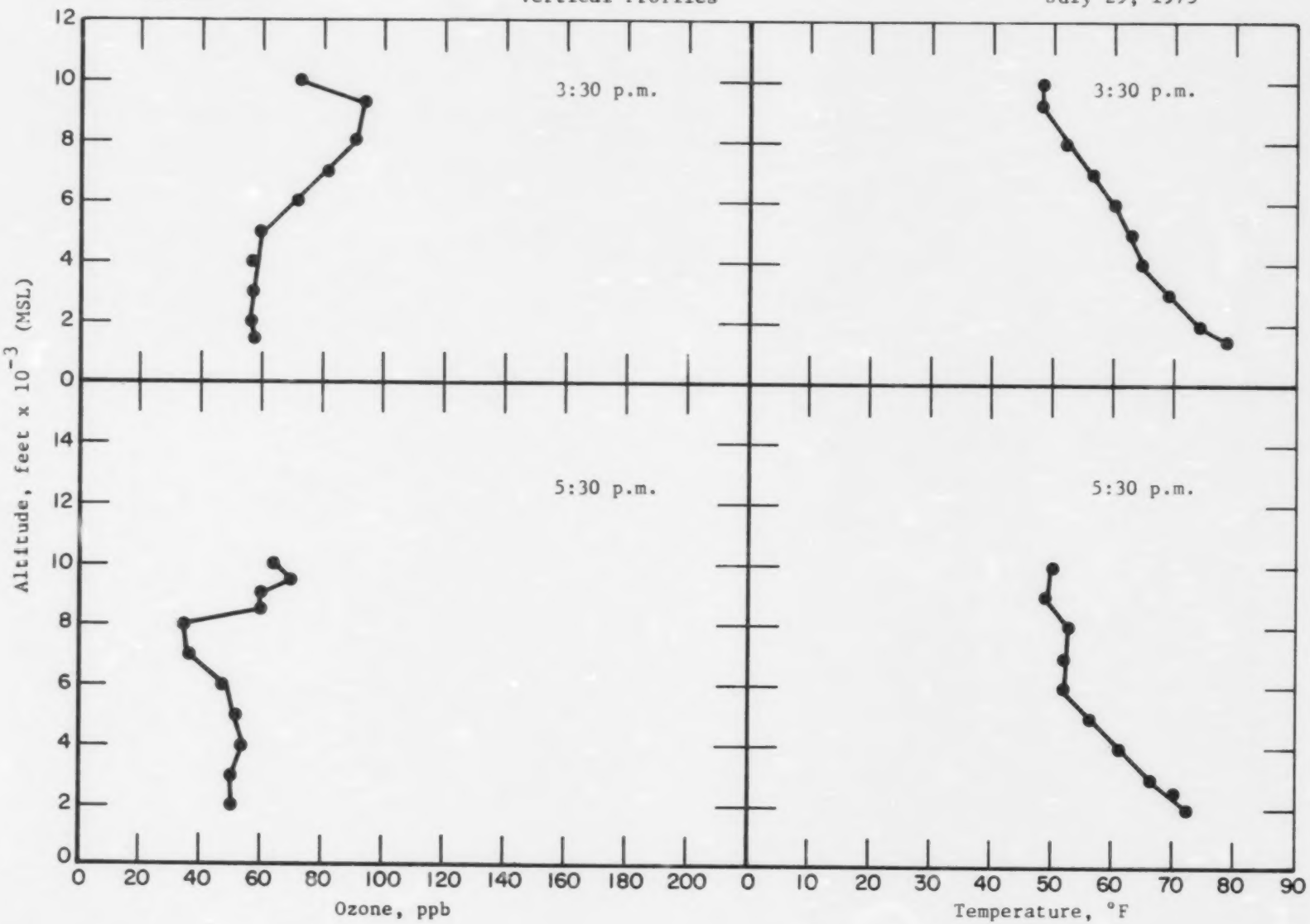


FIGURE 62a.
Tuesday - 7/29/75
Afternoon Flight - 2:37-5:55
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	98	90	90
THC, ppmC	1.70	1.50	1.70
CH_4, ppm	1.45	1.45	1.50
CO, ppm	<0.20	<0.20	<0.20
CCl_4, ppt	30	--	60

FIGURE 62b. Vertical Profiles July 29, 1975



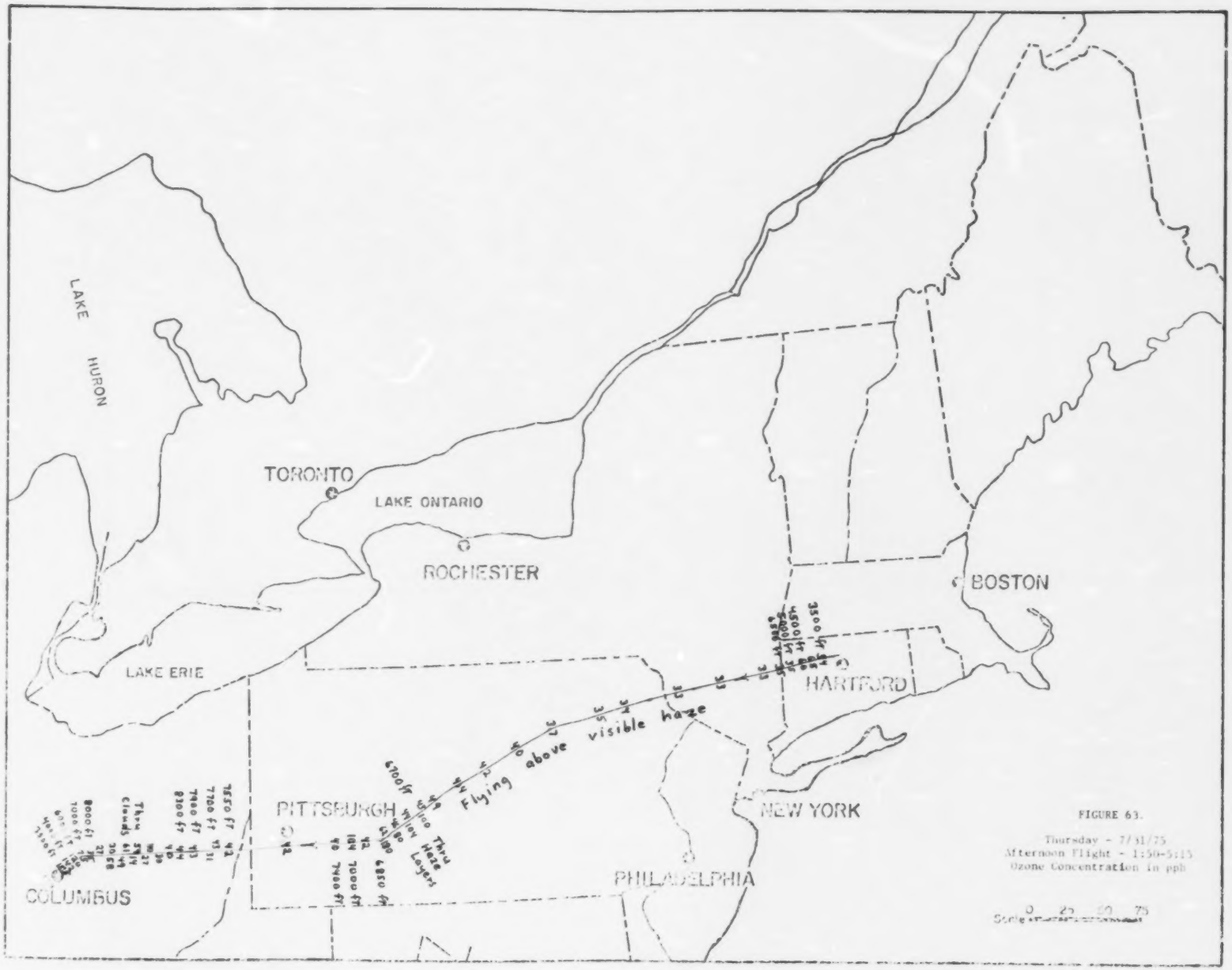


FIGURE 63.

Thursday - 7/31/75
Afternoon Flight - 1:50-5:15
Ozone Concentration in ppb

Scale 0 25 50 75

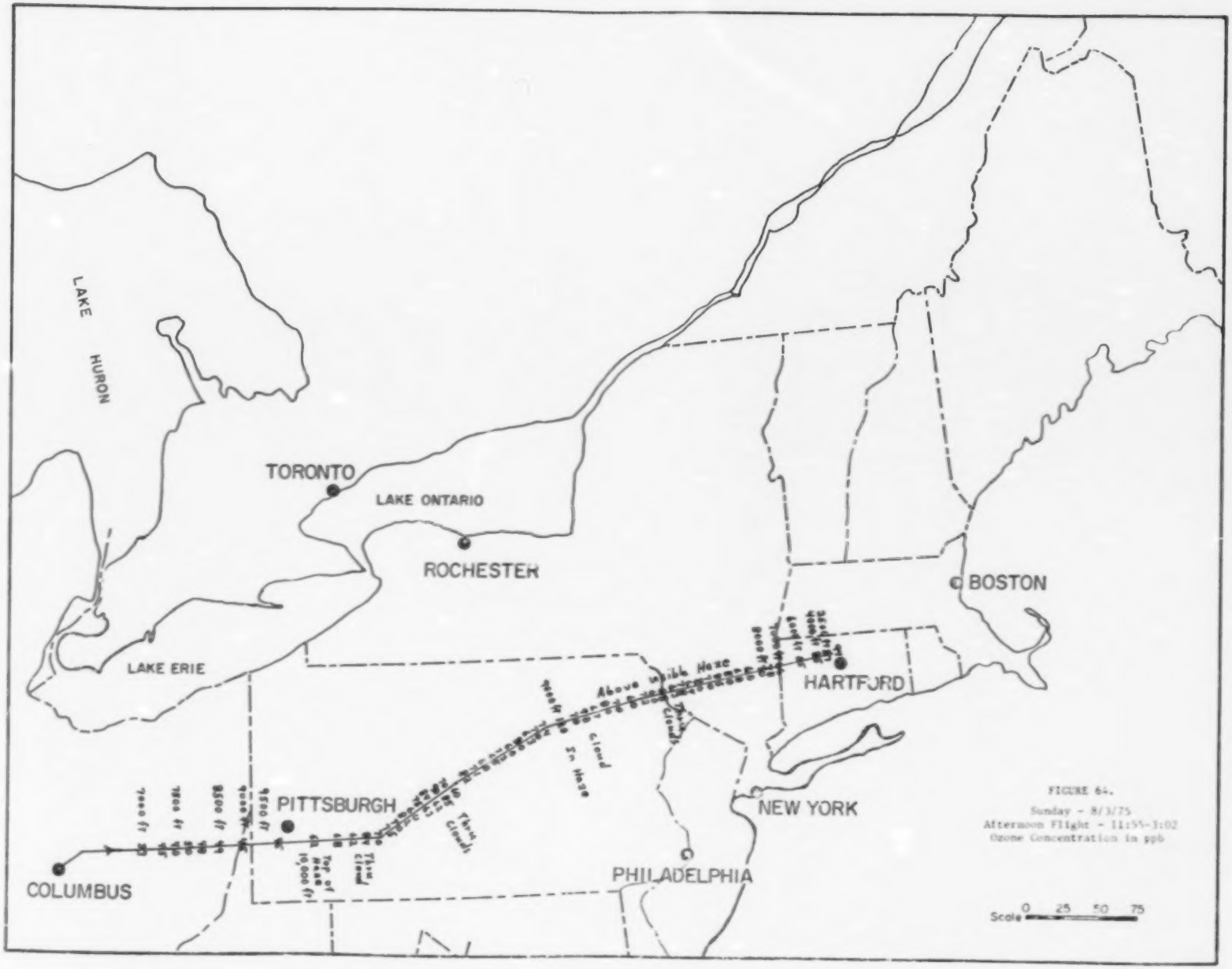


FIGURE 64.

Sunday - 8/3/75
Afternoon Flight - 11:55-3:02
Ozone Concentration in ppb

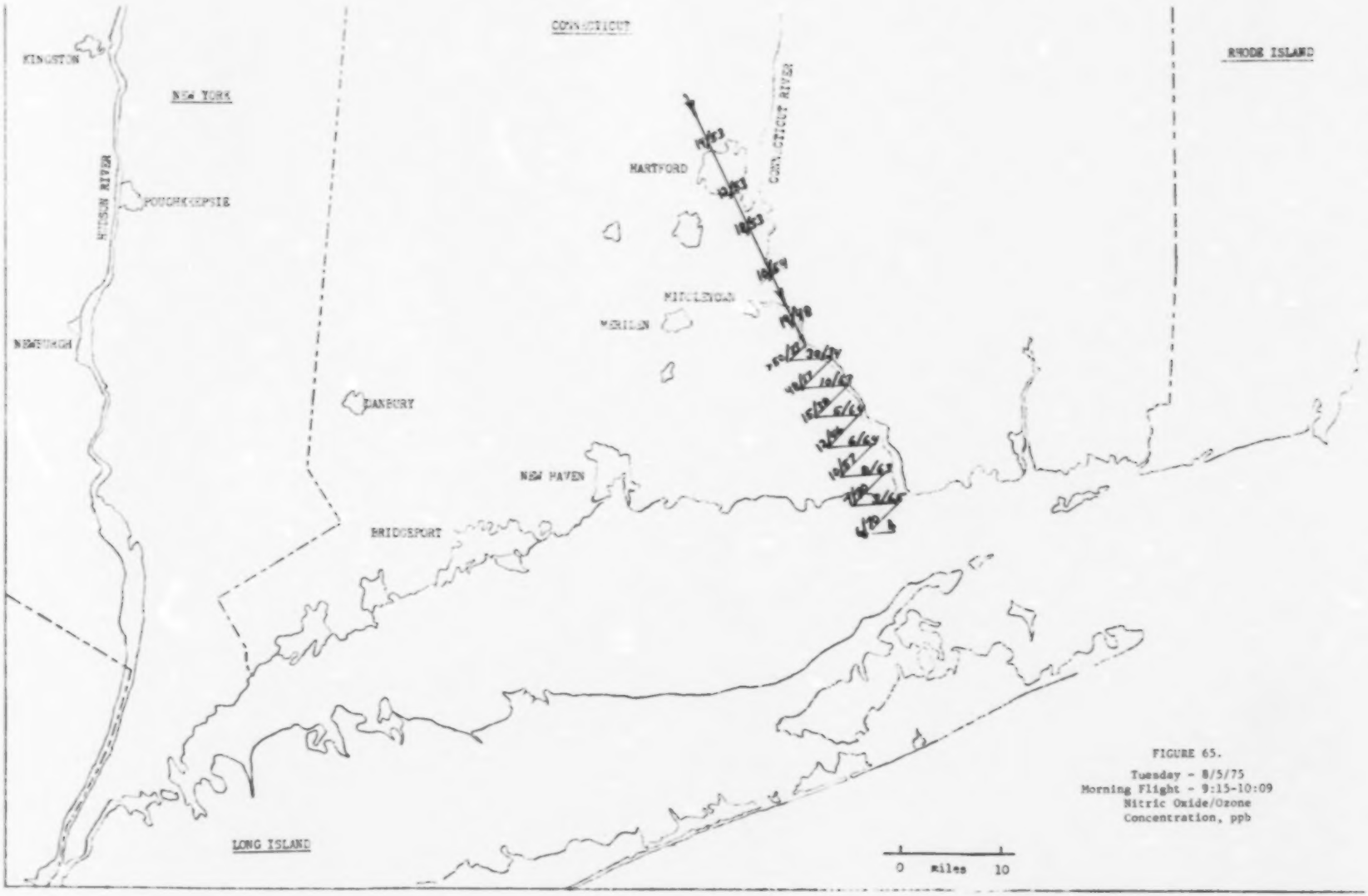


FIGURE 65.

Tuesday - 8/5/75
Morning Flight - 9:15-10:09
Nitric Oxide/Ozone
Concentration, ppb

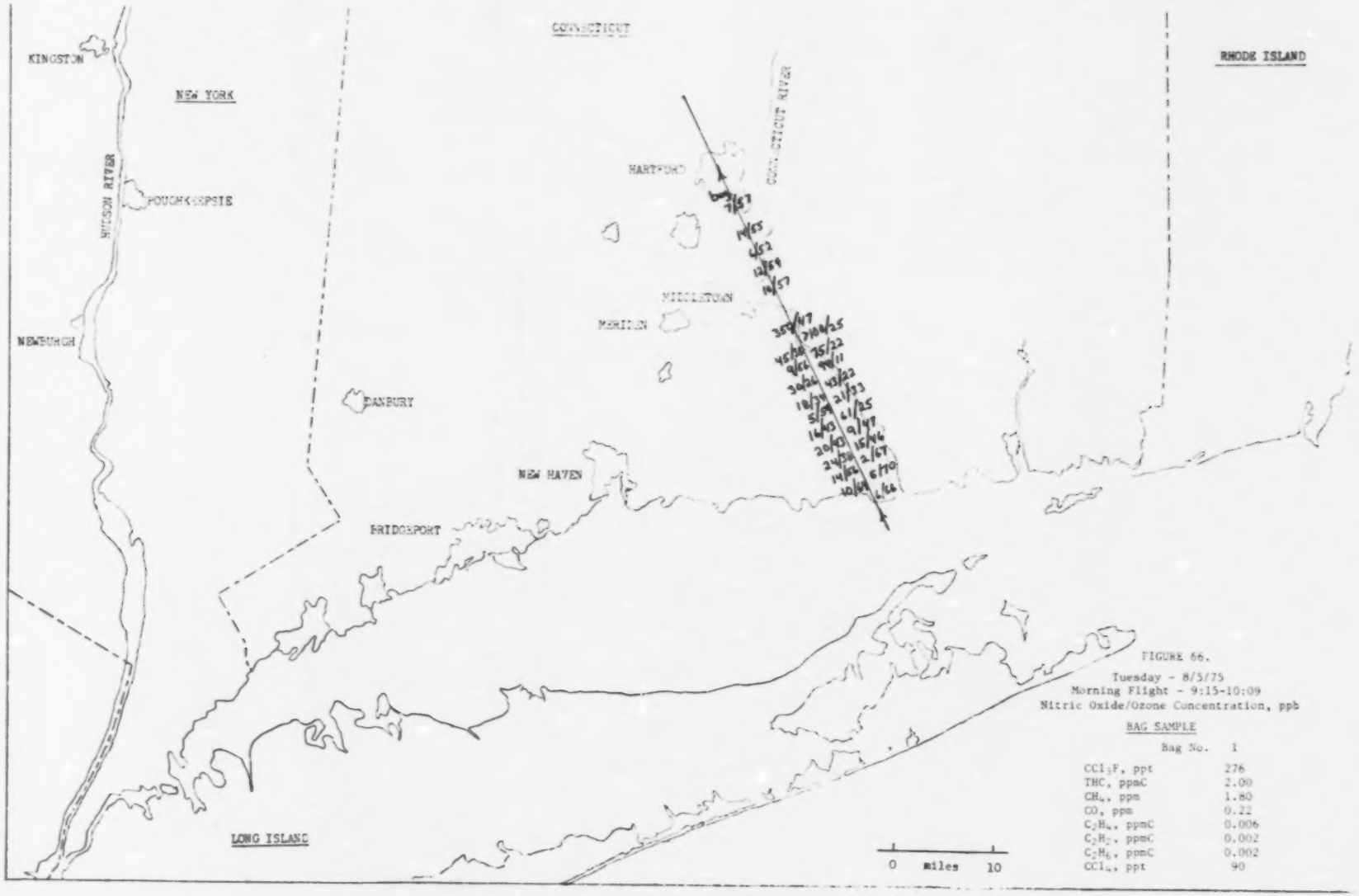


FIGURE 66.

Tuesday - 8/5/75
Morning Flight - 9:15-10:09
Nitric Oxide/Ozone Concentration, ppb

BAG SAMPLE

Bag No.	1
CCl_3F, ppt	276
THC, ppmC	2.00
CH_4, ppm	1.80
CO, ppm	0.22
C_2H_4, ppmC	0.006
C_2H_2, ppmC	0.002
C_2H_6, ppmC	0.002
CCl_4, ppt	90

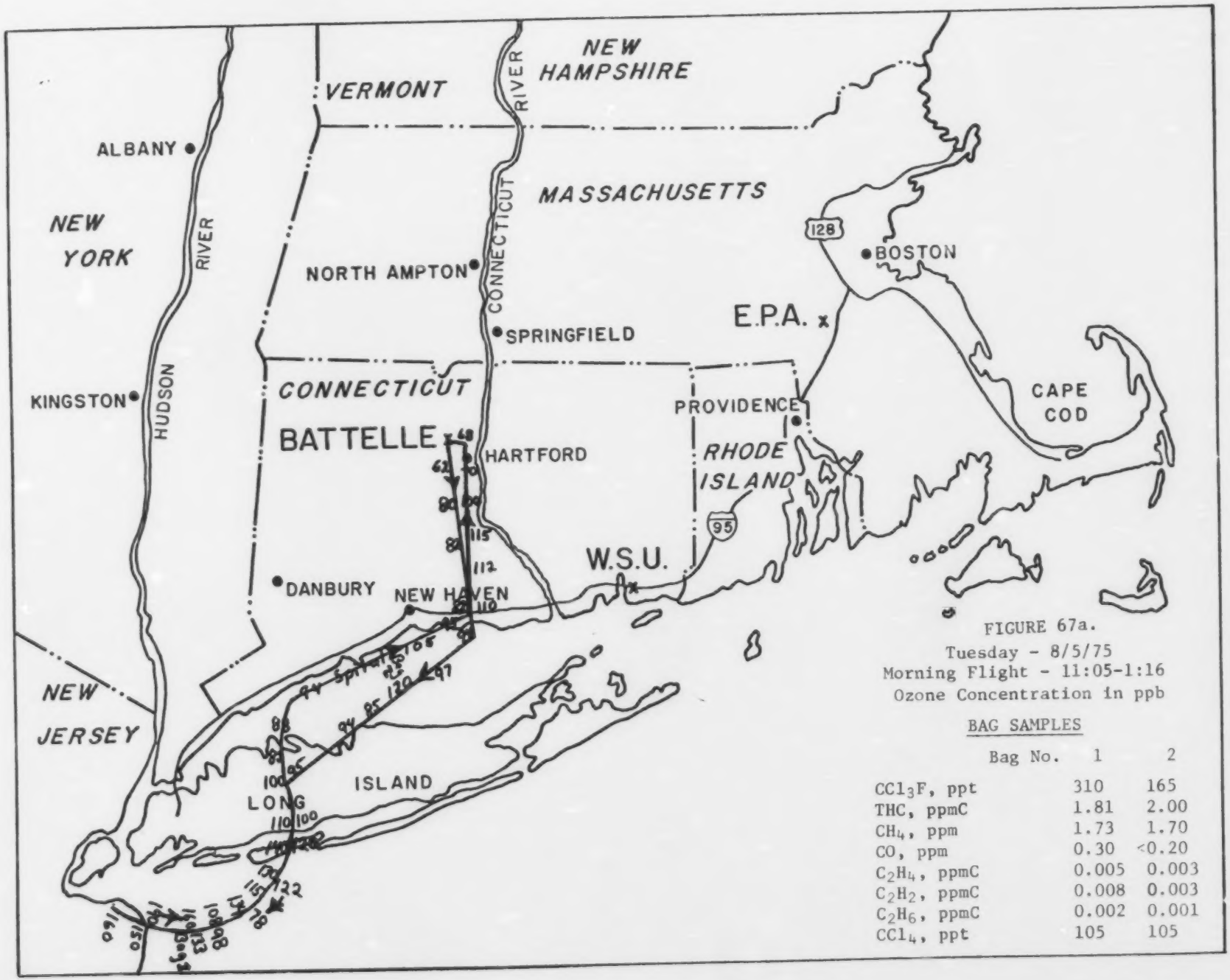
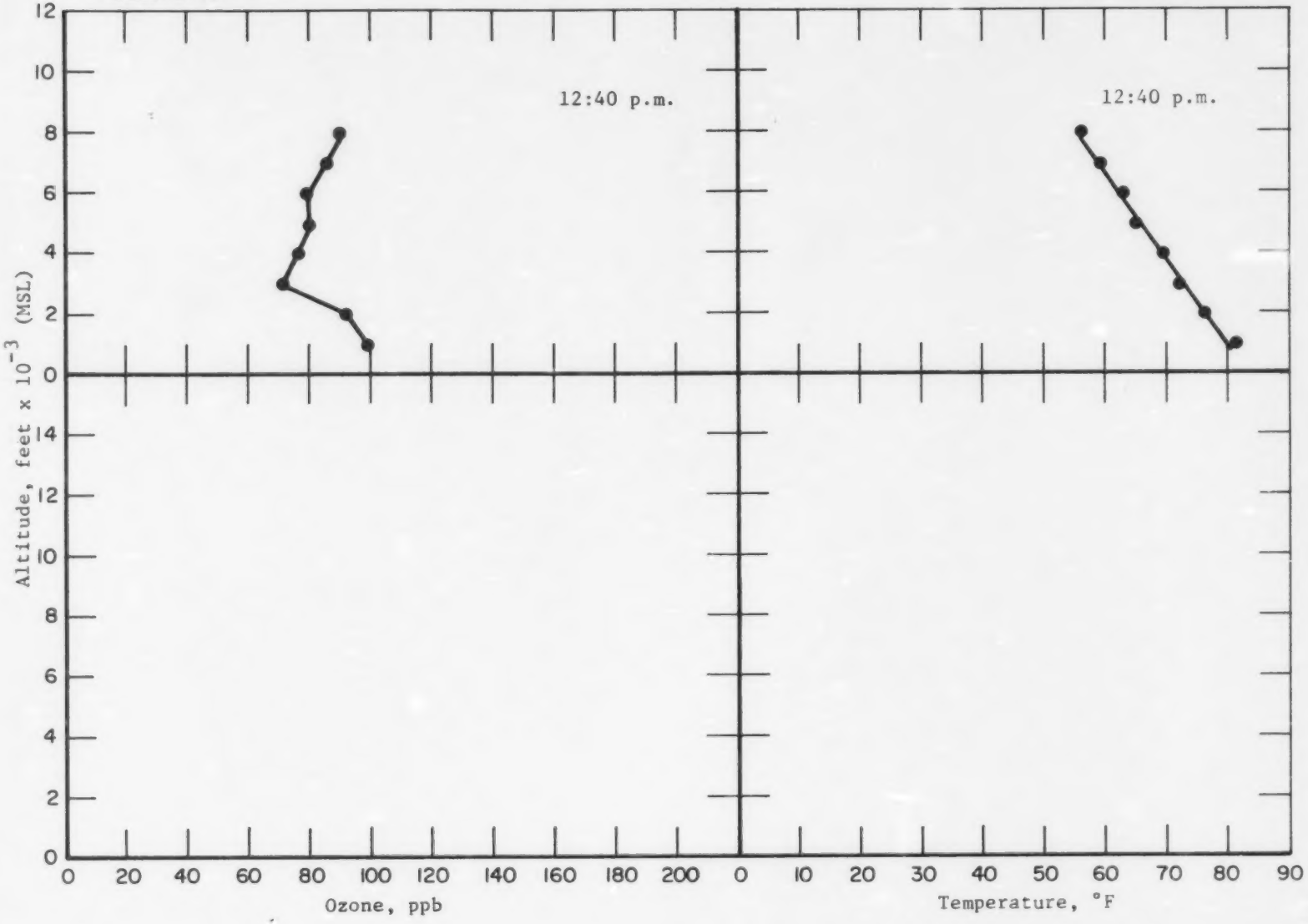


FIGURE 67a.
Tuesday - 8/5/75
Morning Flight - 11:05-1:16
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	310	165
THC, ppmC	1.81	2.00
CH_4, ppm	1.73	1.70
CO, ppm	0.30	<0.20
C_2H_4, ppmC	0.005	0.003
C_2H_2, ppmC	0.008	0.003
C_2H_6, ppmC	0.002	0.001
CCl_4, ppt	105	105

FIGURE 67b. Vertical Profiles August 5, 1975



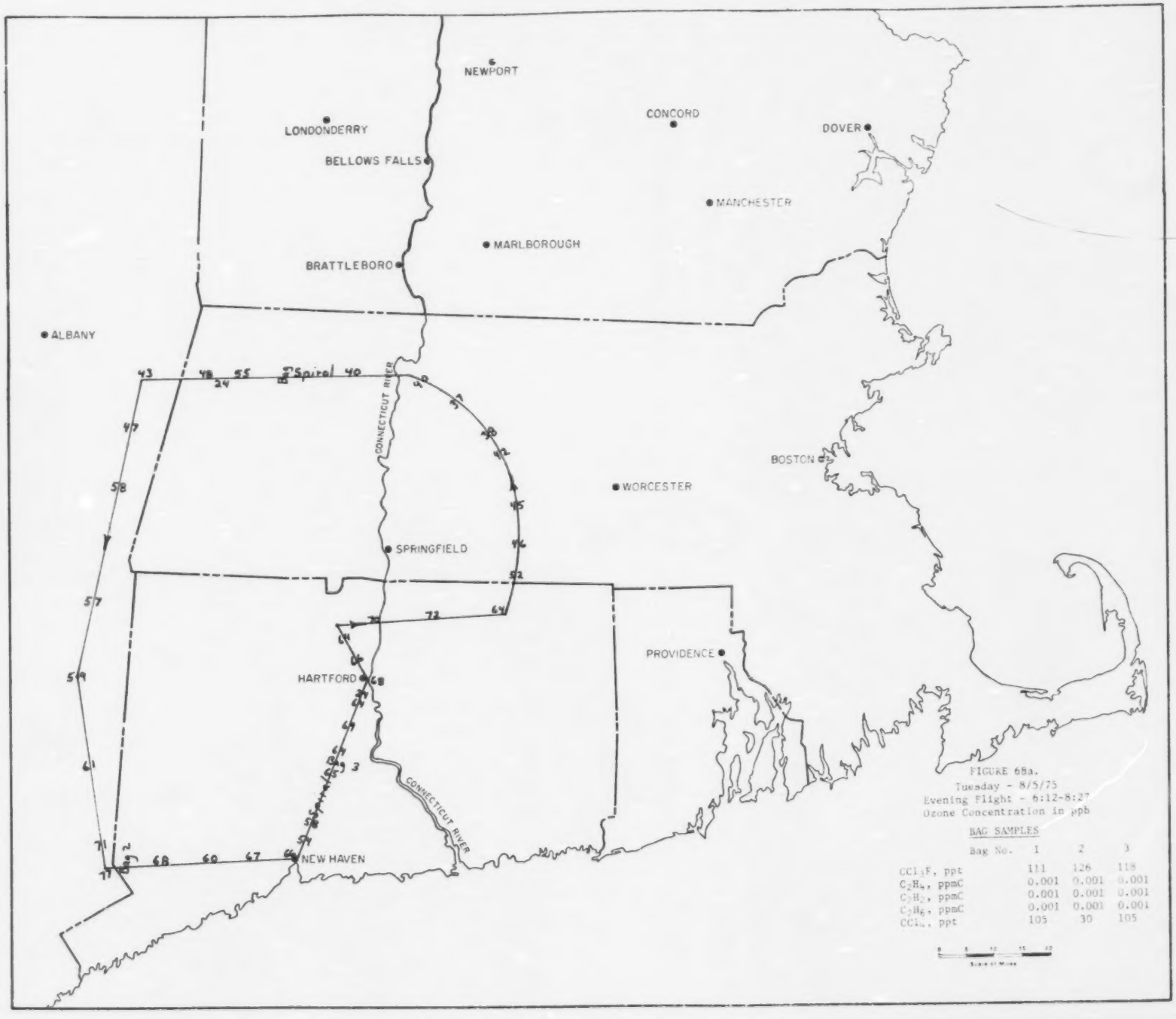
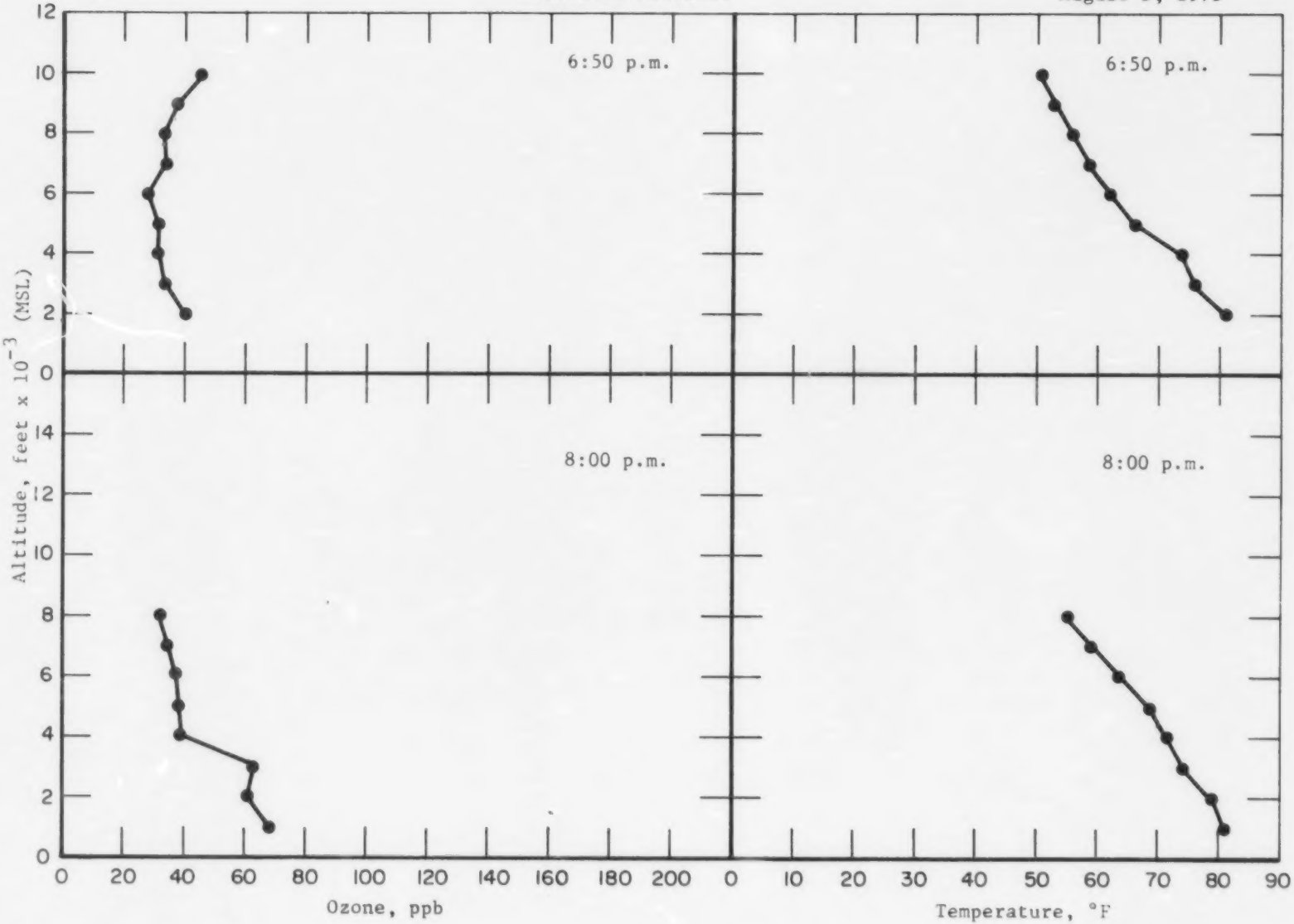


FIGURE 68a.
Tuesday - 8/5/75
Evening Flight - 6:12-8:27
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	111	126	118
C_2H_4, ppmC	0.001	0.001	0.001
C_2H_2, ppmC	0.001	0.001	0.001
C_2H_6, ppmC	0.001	0.001	0.001
CCl_4, ppt	105	30	105

FIGURE 68b. Vertical Profiles August 5, 1975



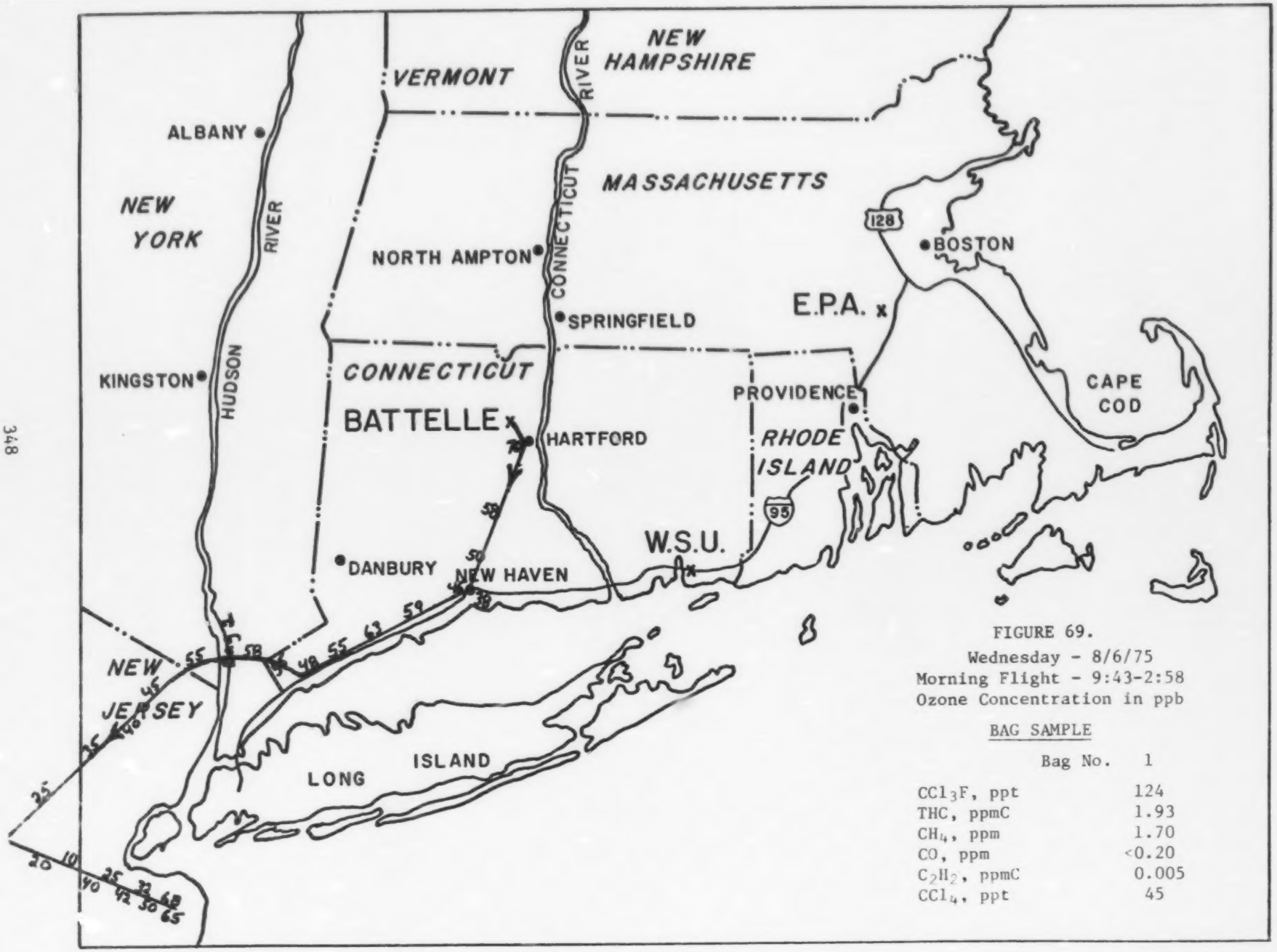


FIGURE 69.

Wednesday - 8/6/75
Morning Flight - 9:43-2:58
Ozone Concentration in ppb

BAG SAMPLE

Bag No.	1
CCl_3F, ppt	124
THC, ppmC	1.93
CH_4, ppm	1.70
CO, ppm	<0.20
C_2H_2, ppmC	0.005
CCl_4, ppt	45

FIGURE 70.

Saturday - 8/9/75
Morning Flight - 11:17-12:13
Nitric Oxide/Ozone
concentration, ppb

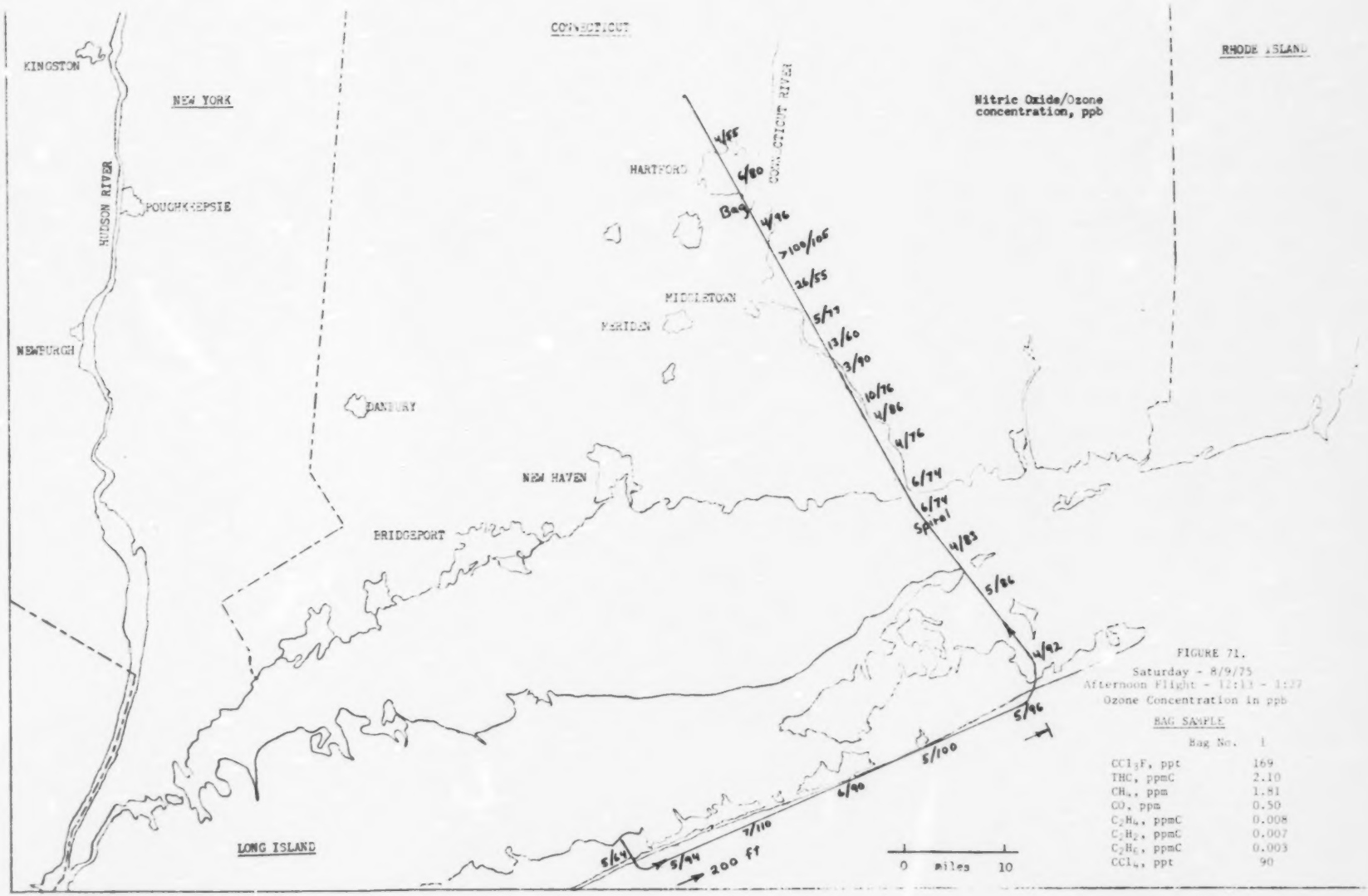


FIGURE 71.
Saturday - 8/9/75
Afternoon Flight - 12:13 - 1:27
Ozone Concentration in ppb

BAG SAMPLE

Bag No.	1
CCl_3F, ppt	169
THC, ppmC	2.10
CH_4, ppm	1.81
CO, ppm	0.50
C_2H_4, ppmC	0.008
C_2H_2, ppmC	0.007
C_2H_6, ppmC	0.003
CCl_4, ppt	90

FIGURE 72a.
Saturday - 8/9/75
Evening Flight - 5:03-8:02
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3	4	5
CCl_3F, ppt	195	103	126	163	111
THC, ppmC	1.95	1.83	1.95	2.05	2.05
CH_4, ppm	1.82	1.73	1.80	1.75	1.73
CO, ppm	0.45	<0.20	0.20	0.30	0.15
C_2H_4, ppmC	0.005	0.001	0.003	0.004	0.004
C_2H_2, ppmC	0.005	0.001	0.005	0.006	0.001
C_2H_6, ppmC	0.004	0.001	0.004	0.002	0.003
CCl_4, ppt	--	--	--	--	75

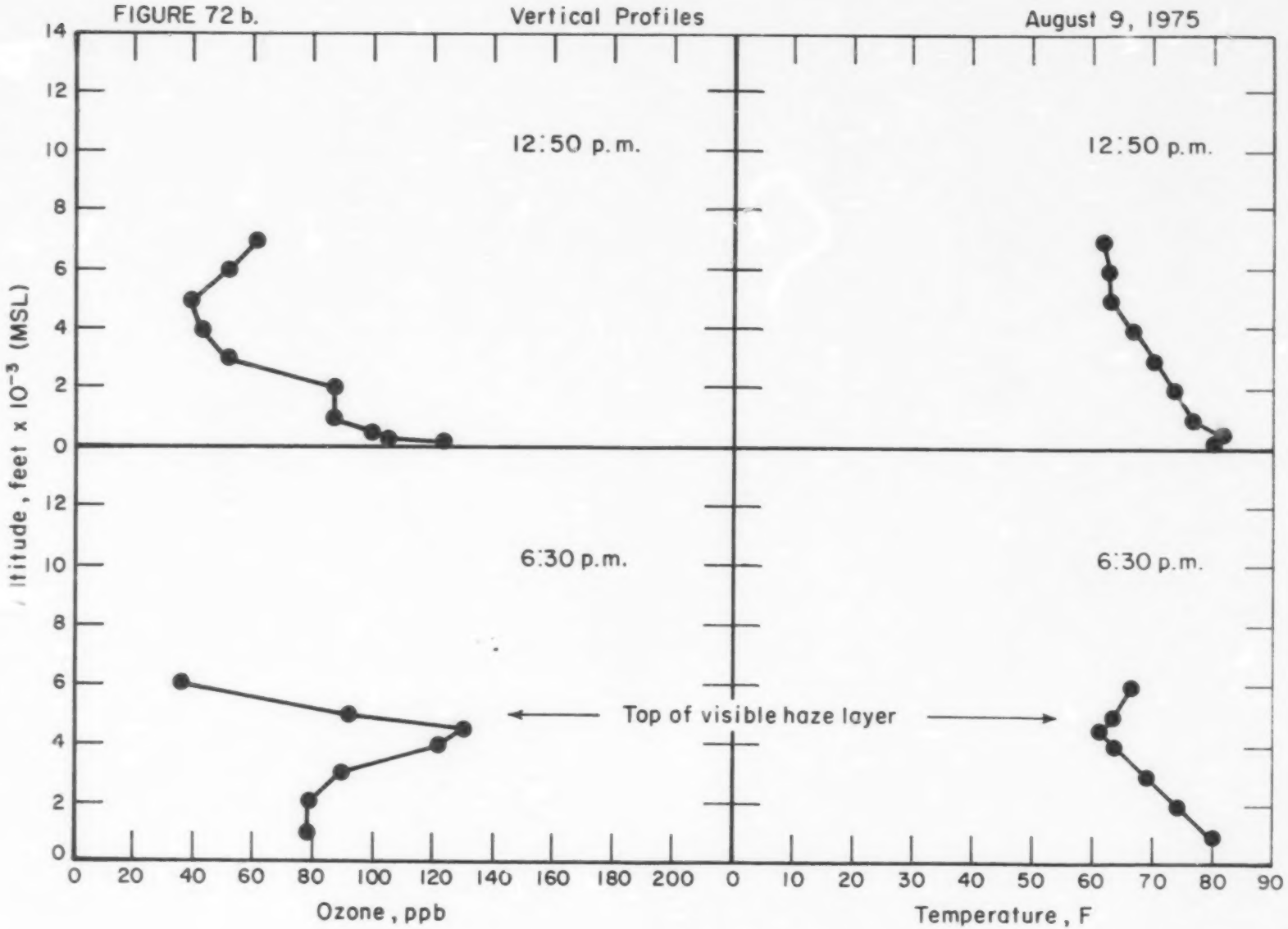
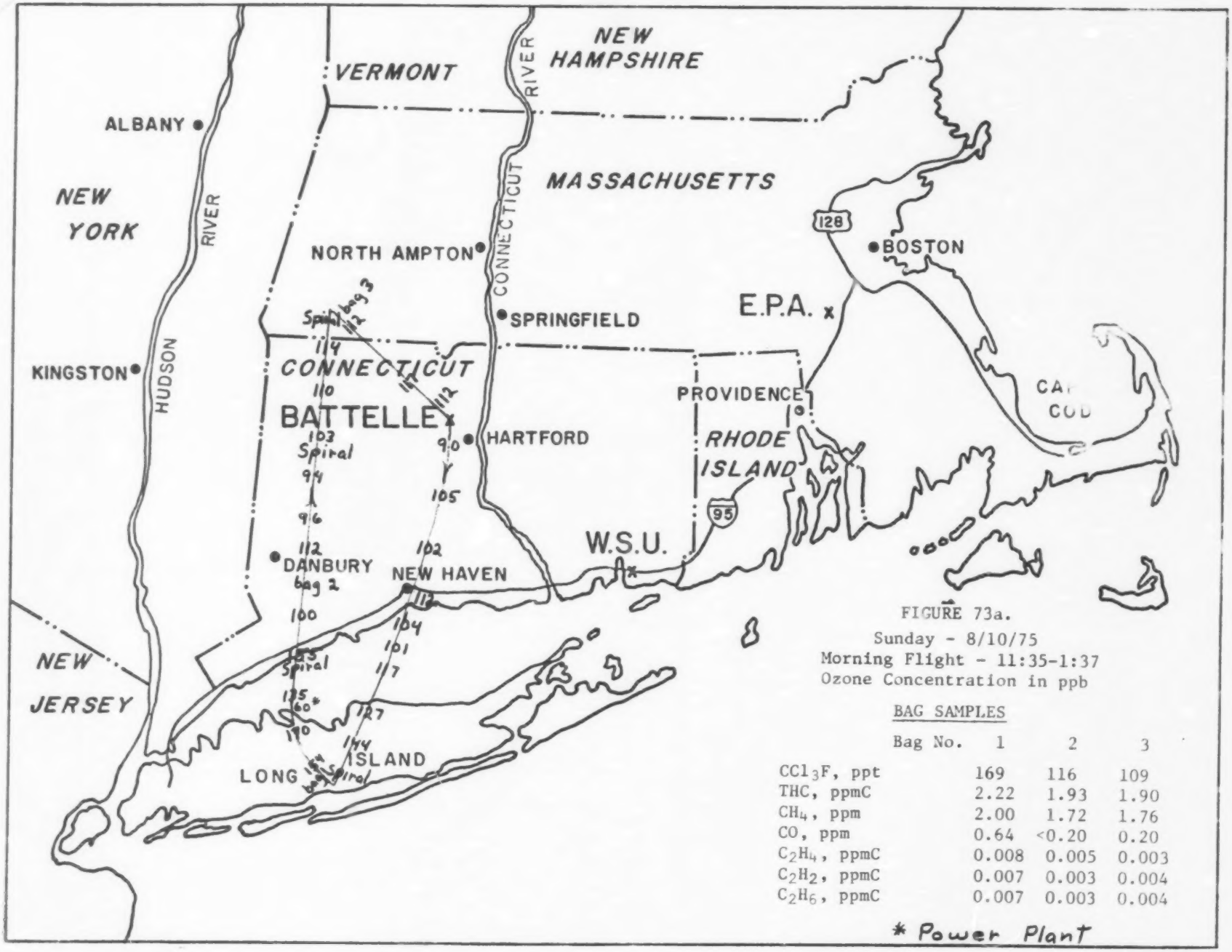


FIGURE 72 b.
Vertical Profiles
August 9, 1975
12:50 p.m.
12:50 p.m.
6:30 p.m.
6:30 p.m.
Top of visible haze layer
Altitude, feet x 10^{-3} (MSL)
Ozone, ppb
Temperature, F
0 20 40 60 80 100 120 140 160 180 200
0 10 20 30 40 50 60 70 80 90
0 2 4 6 8 10 12 14



Bag No.	1	2	3
CCl_3F, ppt	169	116	109
THC, ppmC	2.22	1.93	1.90
CH_4, ppm	2.00	1.72	1.76
CO, ppm	0.64	<0.20	0.20
C_2H_4, ppmC	0.008	0.005	0.003
C_2H_2, ppmC	0.007	0.003	0.004
C_2H_6, ppmC	0.007	0.003	0.004

FIGURE 73b. Vertical Profiles August 10, 1975

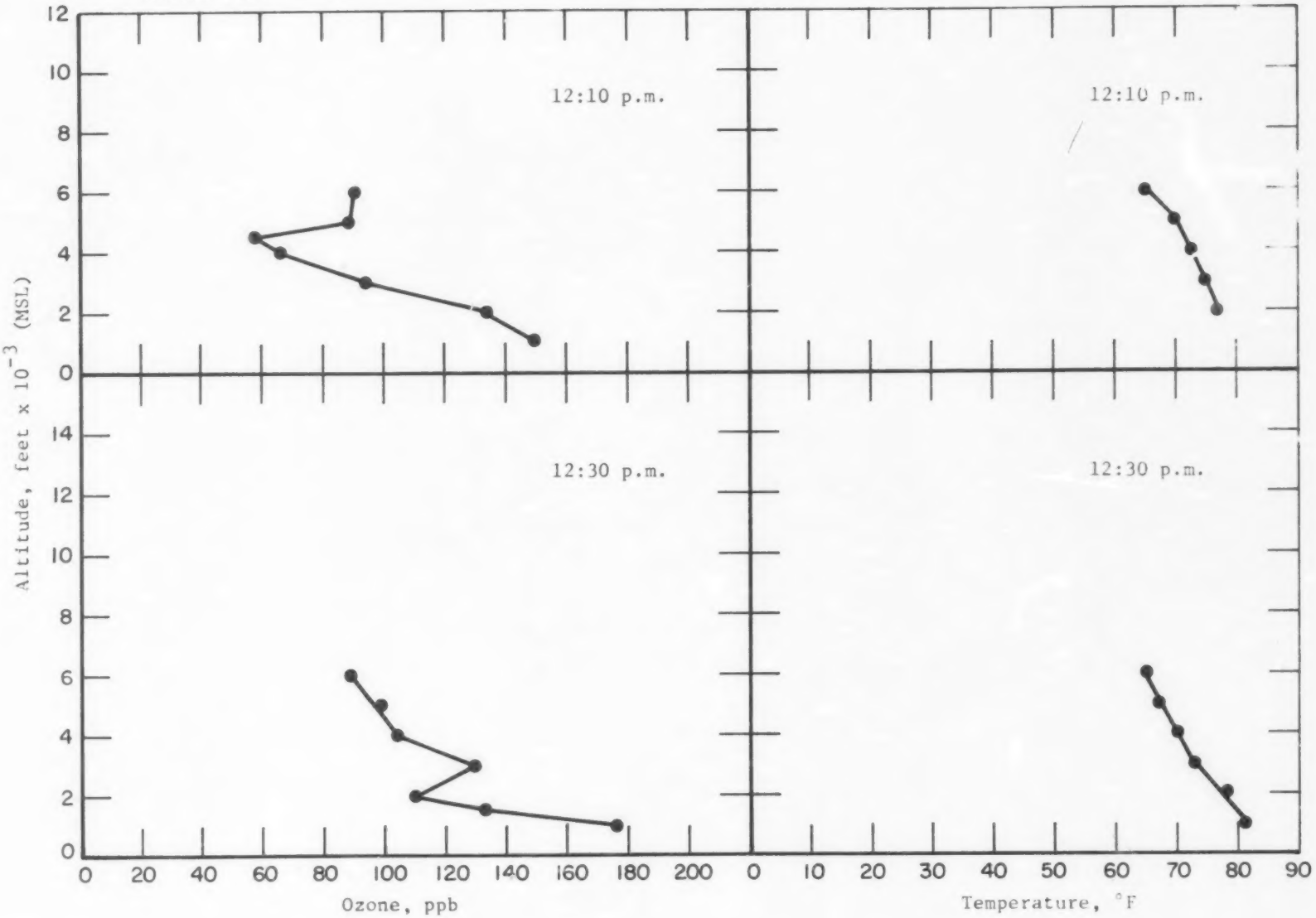
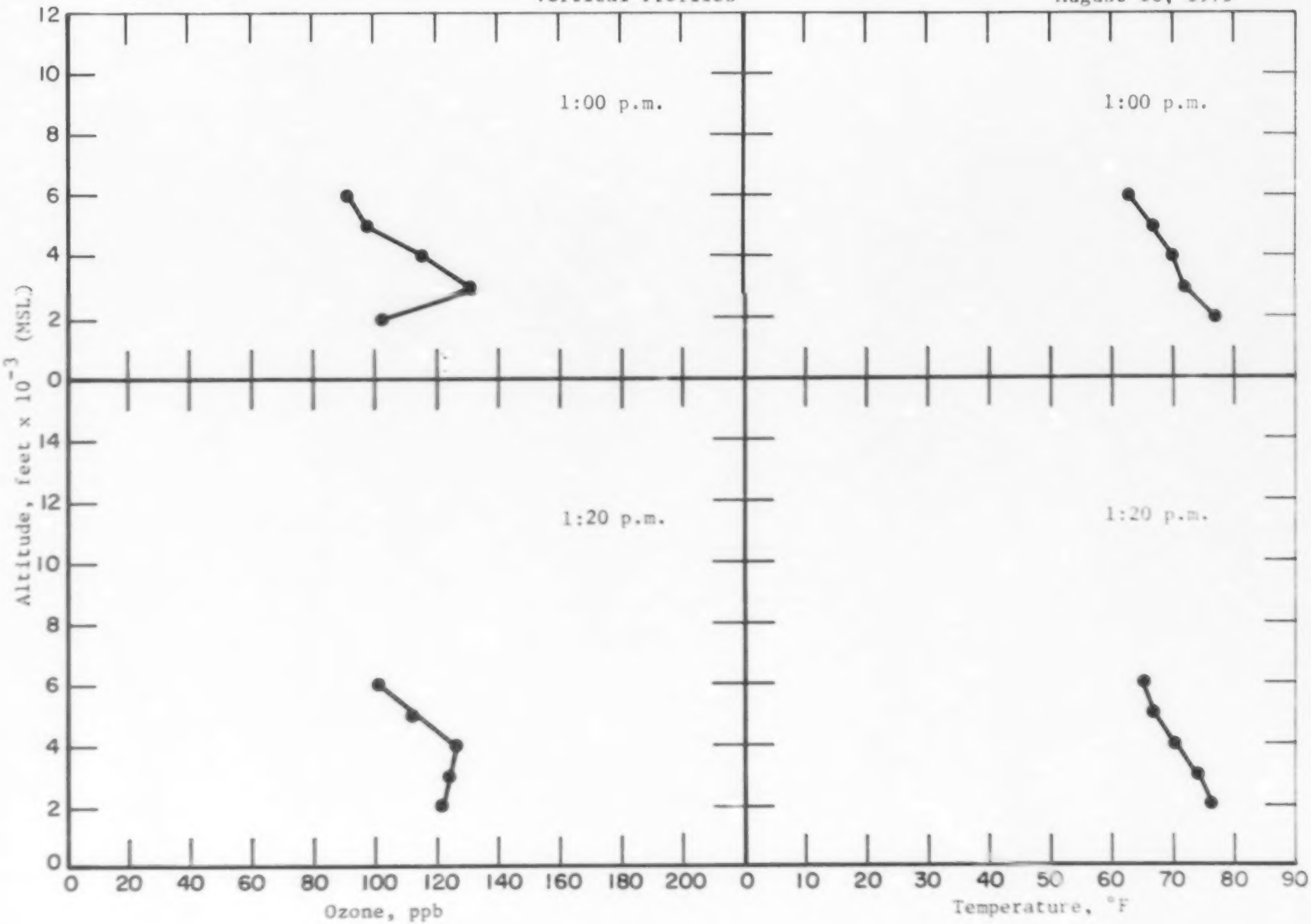


FIGURE 73c. Vertical Profiles August 10, 1975



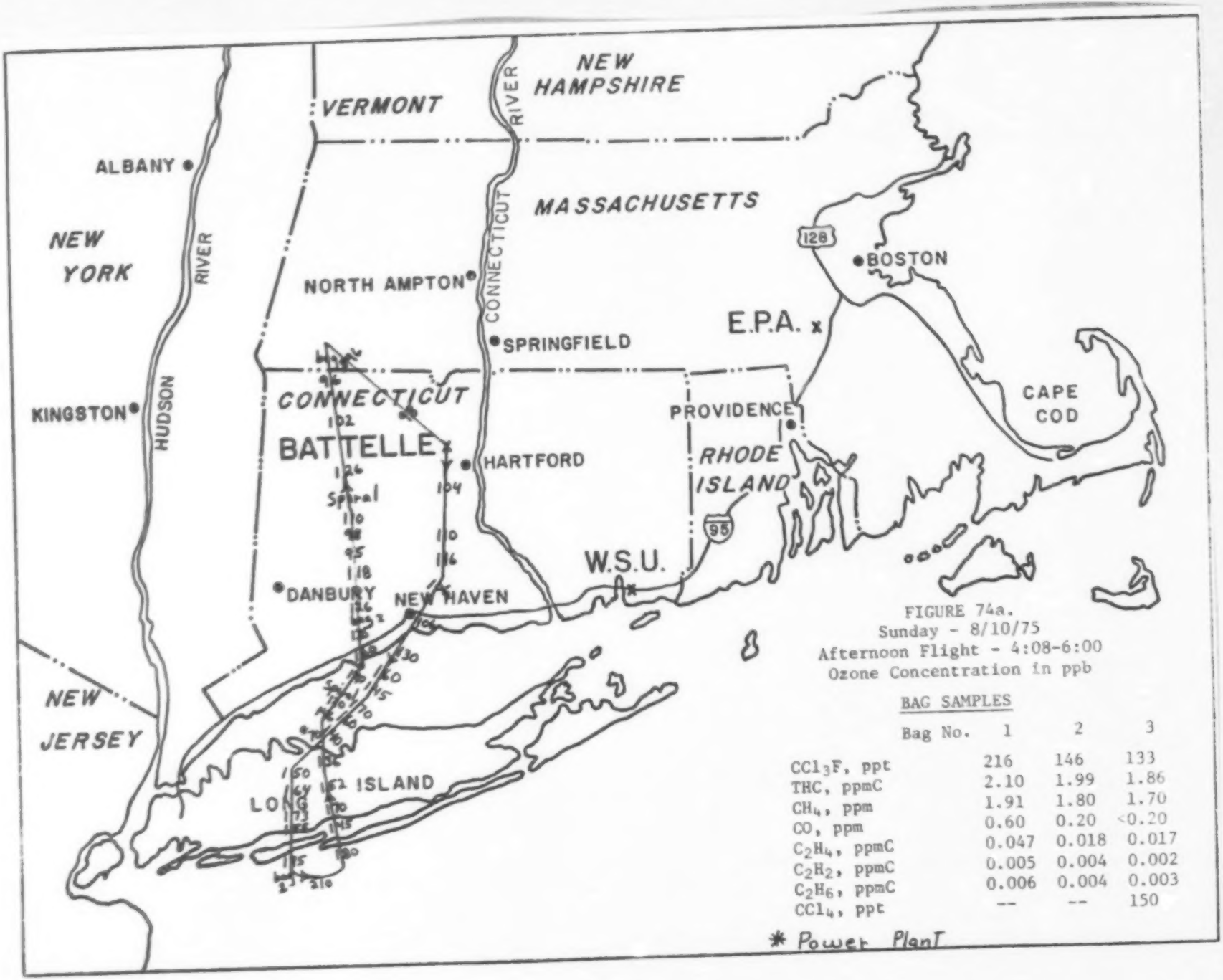


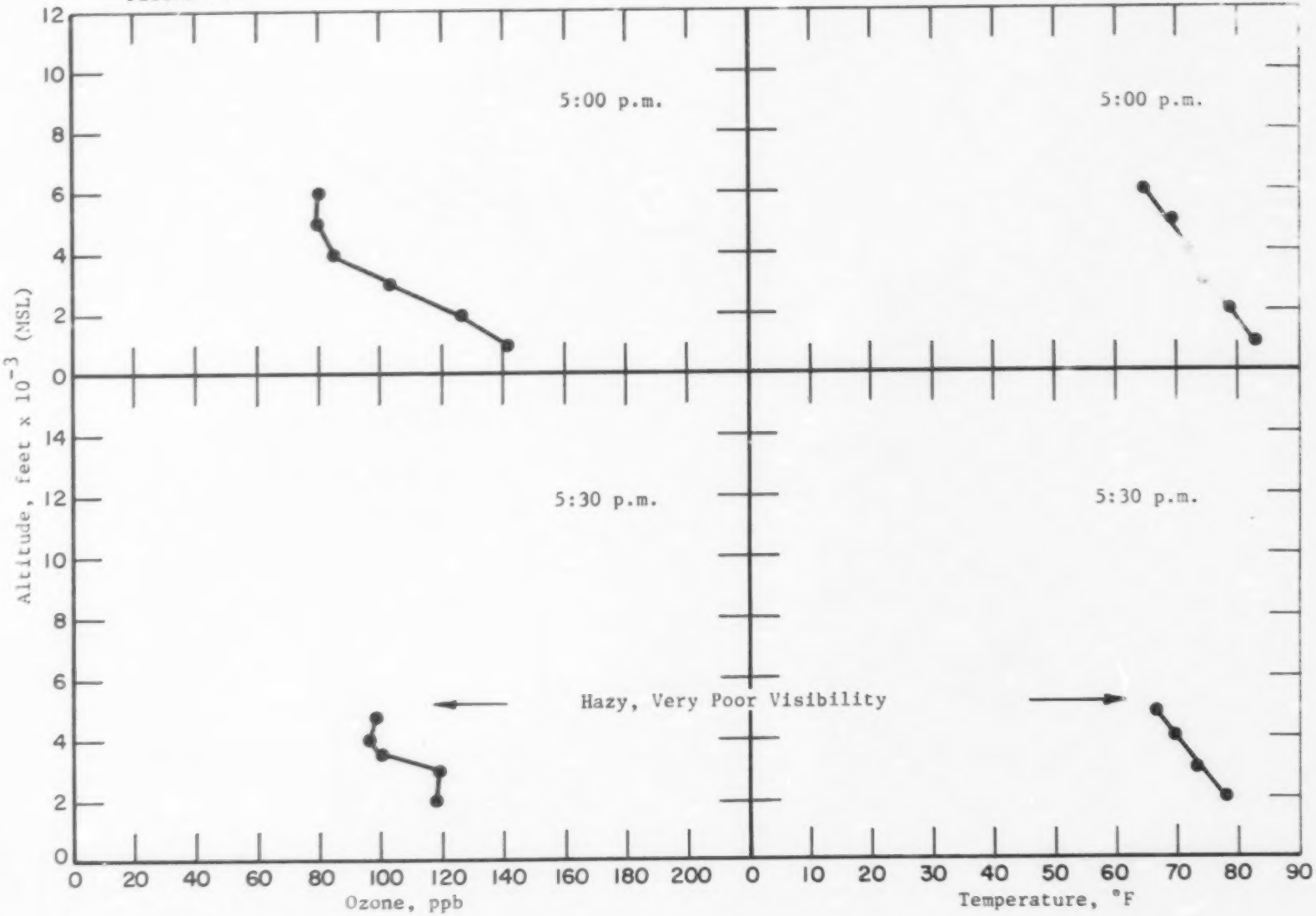
FIGURE 74a.
Sunday - 8/10/75
Afternoon Flight - 4:08-6:00
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	216	146	133
THC, ppmC	2.10	1.99	1.86
CH_4, ppm	1.91	1.80	1.70
CO, ppm	0.60	0.20	<0.20
C_2H_4, ppmC	0.047	0.018	0.017
C_2H_2, ppmC	0.005	0.004	0.002
C_2H_6, ppmC	0.006	0.004	0.003
CCl_4, ppt	--	--	150

* Power Plant

FIGURE 74b. Vertical Profiles August 10,



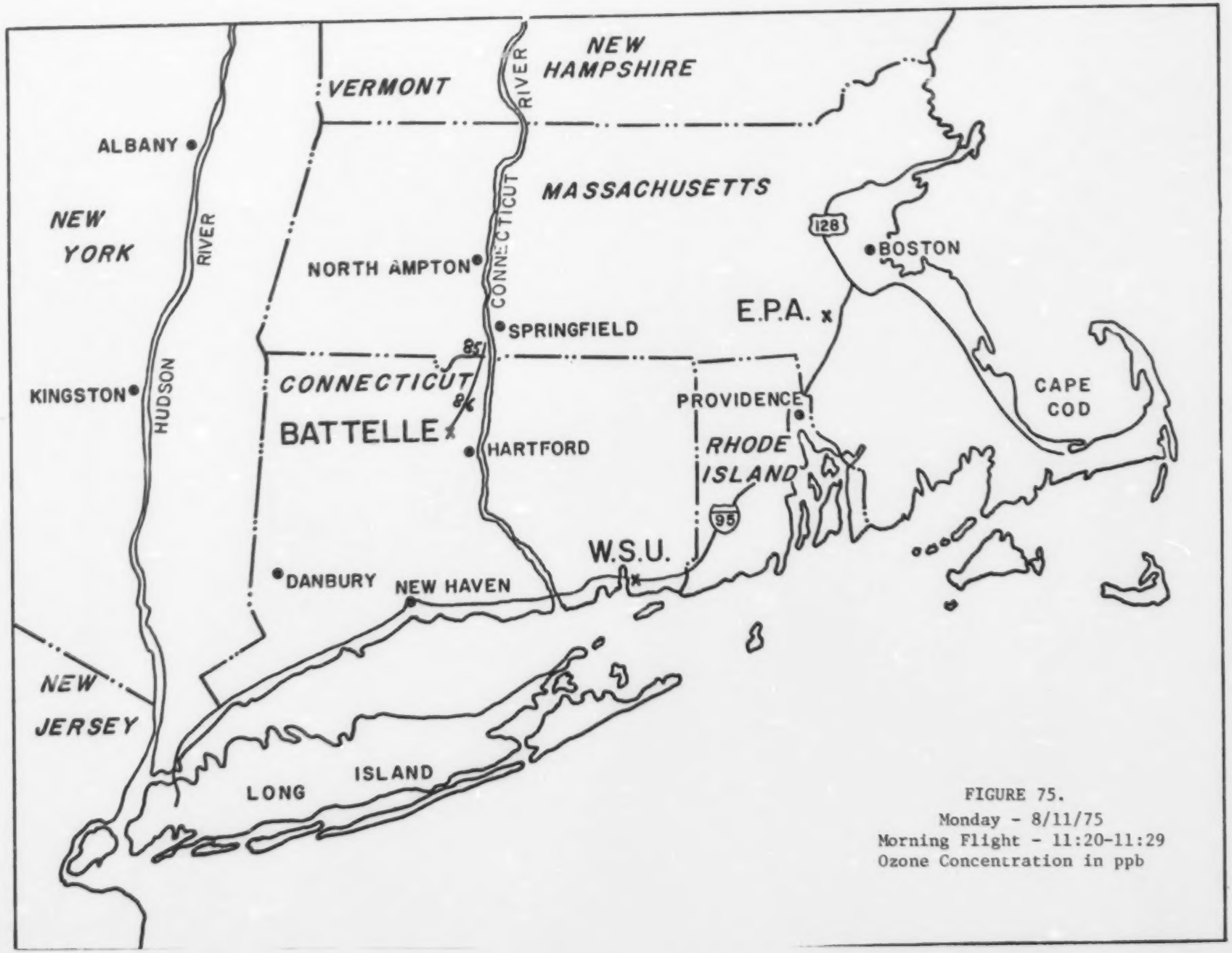


FIGURE 75.
Monday - 8/11/75
Morning Flight - 11:20-11:29
Ozone Concentration in ppb

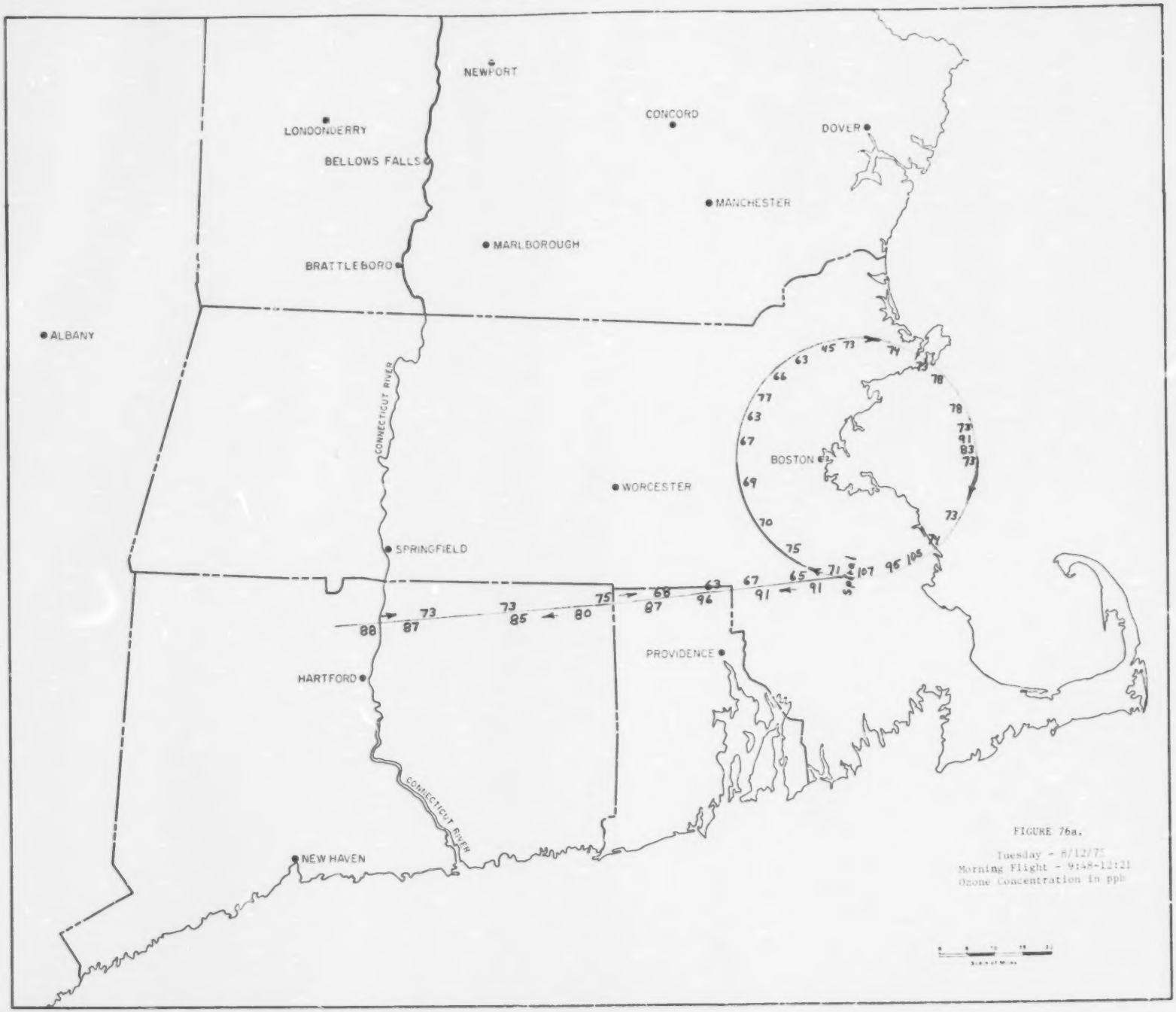
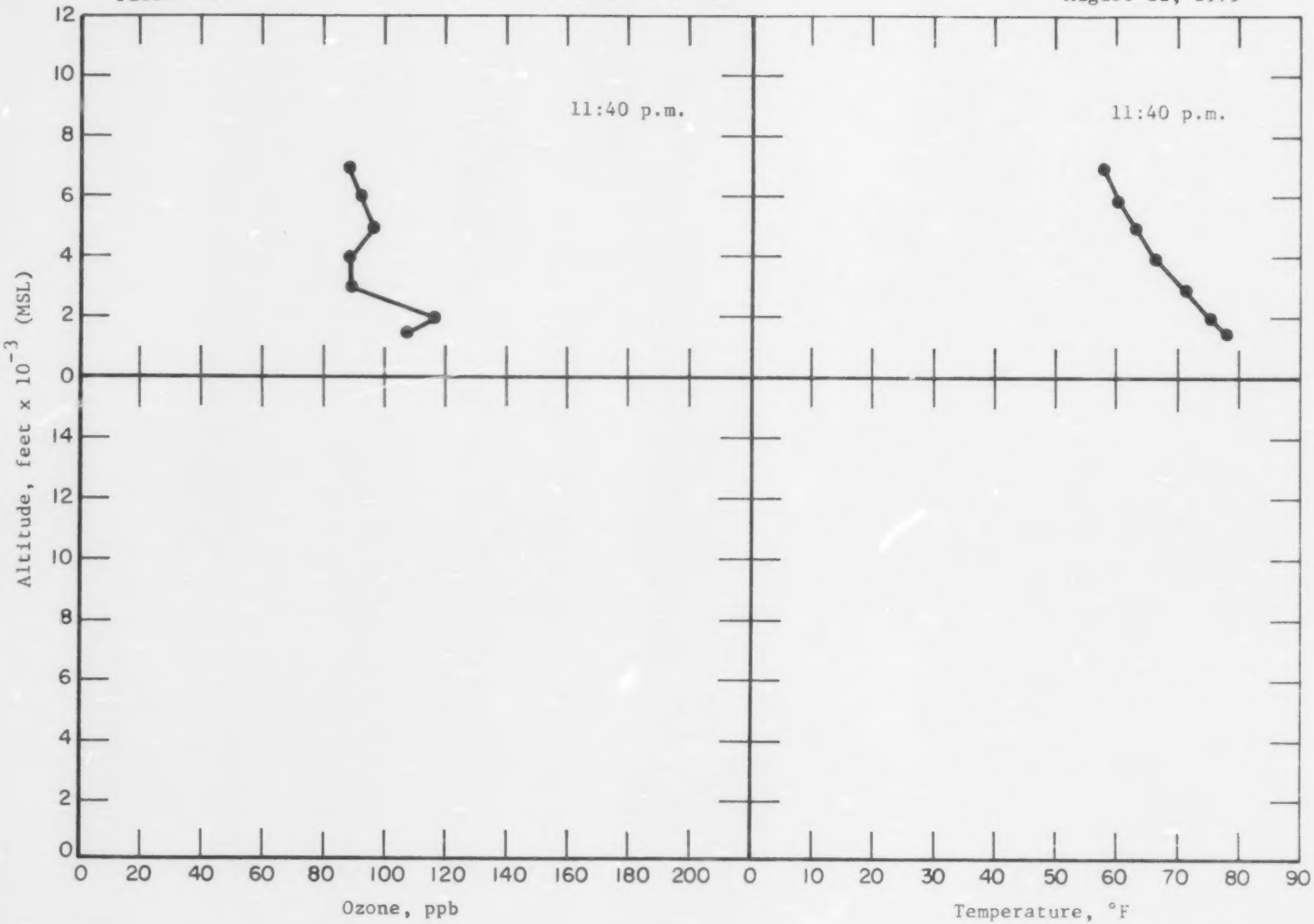


FIGURE 76a.

Tuesday - 8/12/75
Morning Flight - 9:48-12:21
Ozone Concentration in ppb

FIGURE 76b. Vertical Profiles August 12, 1975



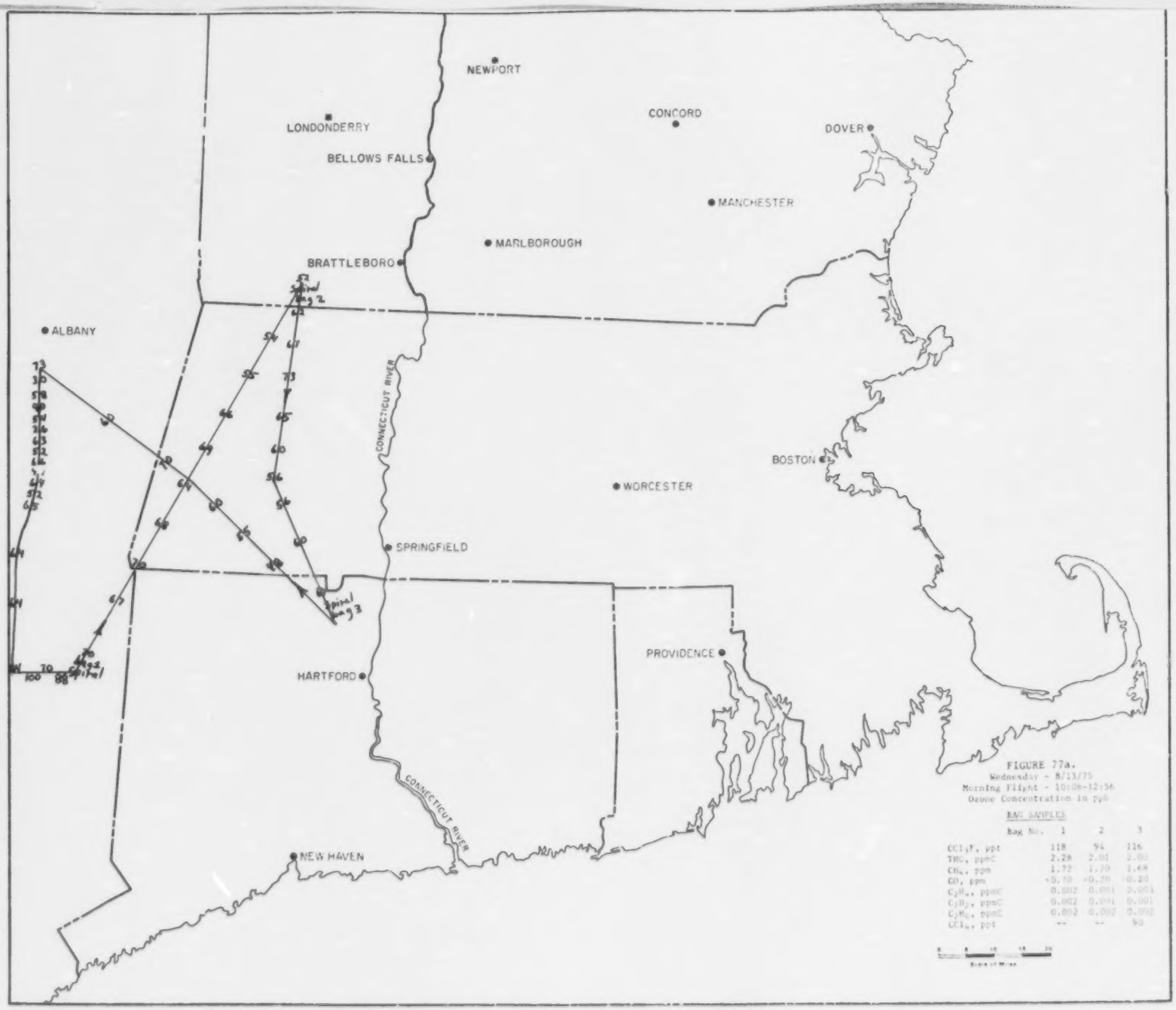


FIGURE 77a.
Wednesday - 8/13/75
Morning Flight - 10:08-12:56
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	118	94	116
THC, ppmC	2.28	2.01	2.00
CH_4, ppm	1.72	1.70	1.68
CO, ppm	<0.70	<0.70	<0.20
C_2H_6, ppmC	0.002	0.001	0.001
C_3H_8, ppmC	0.002	0.001	0.001
C_4H_{10}, ppmC	0.002	0.002	0.002
CCl_4, ppt	--	--	90

FIGURE 77b. Vertical Profiles August 13, 1975

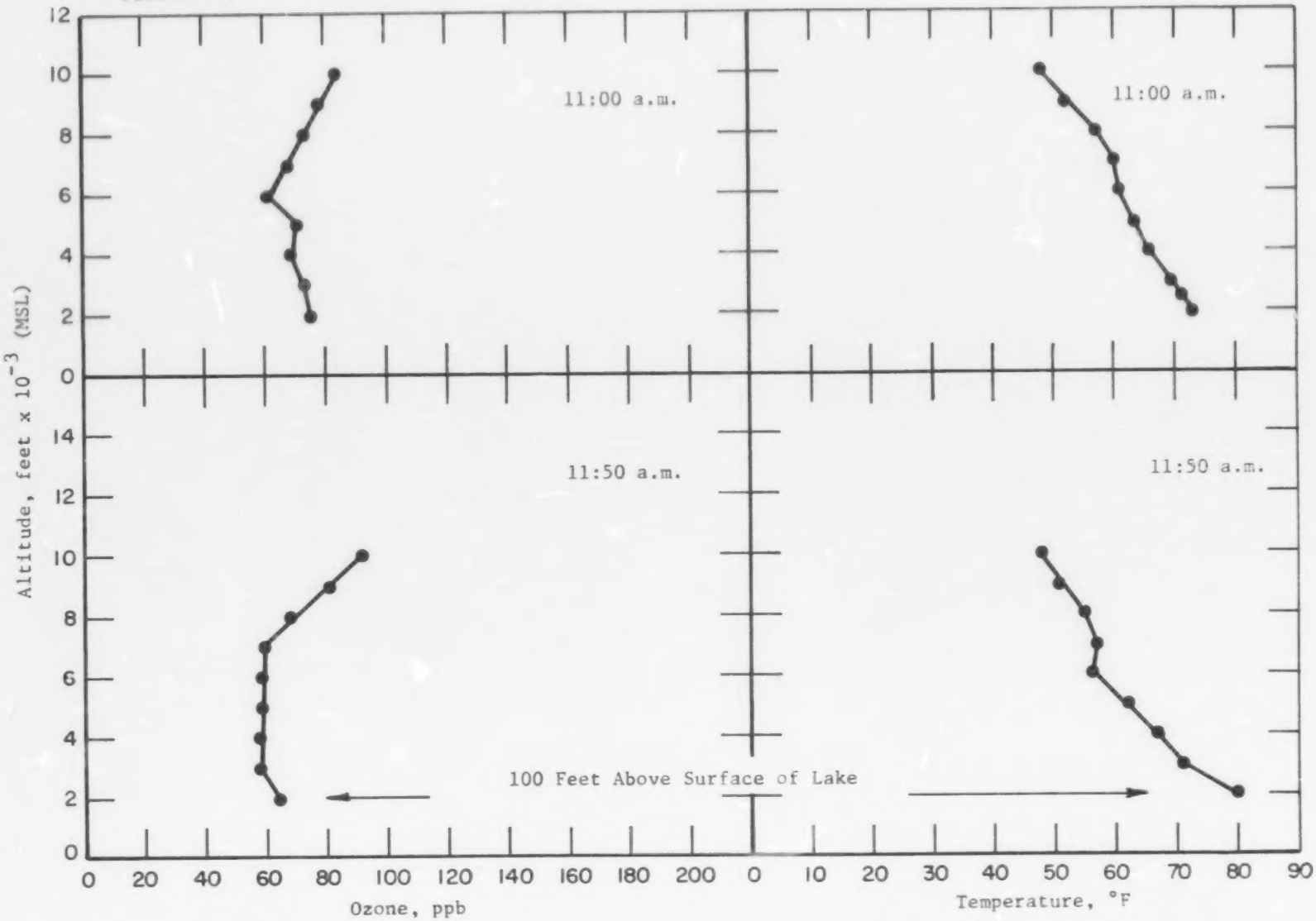
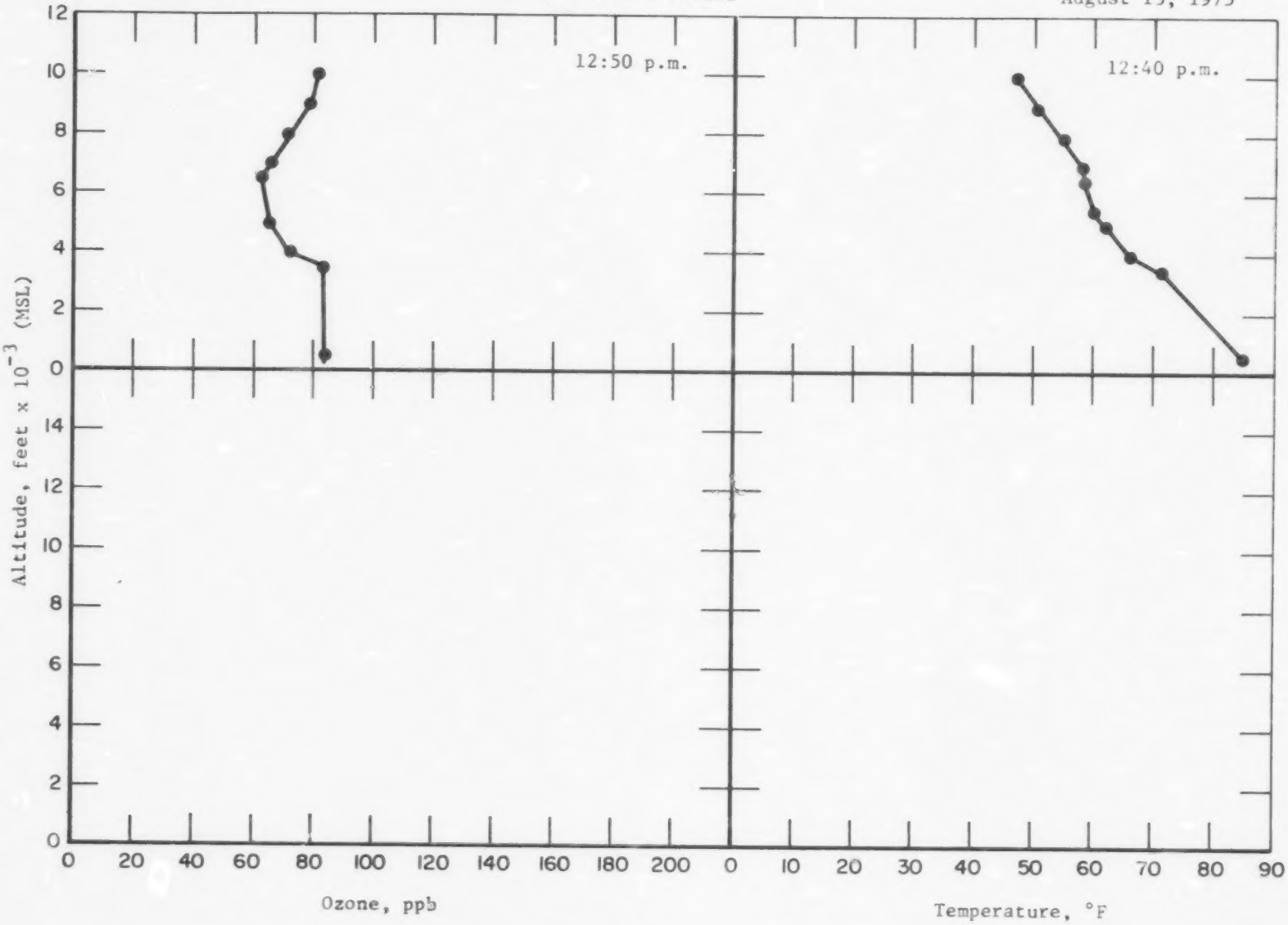


FIGURE 77c. Vertical Profiles August 13, 1975



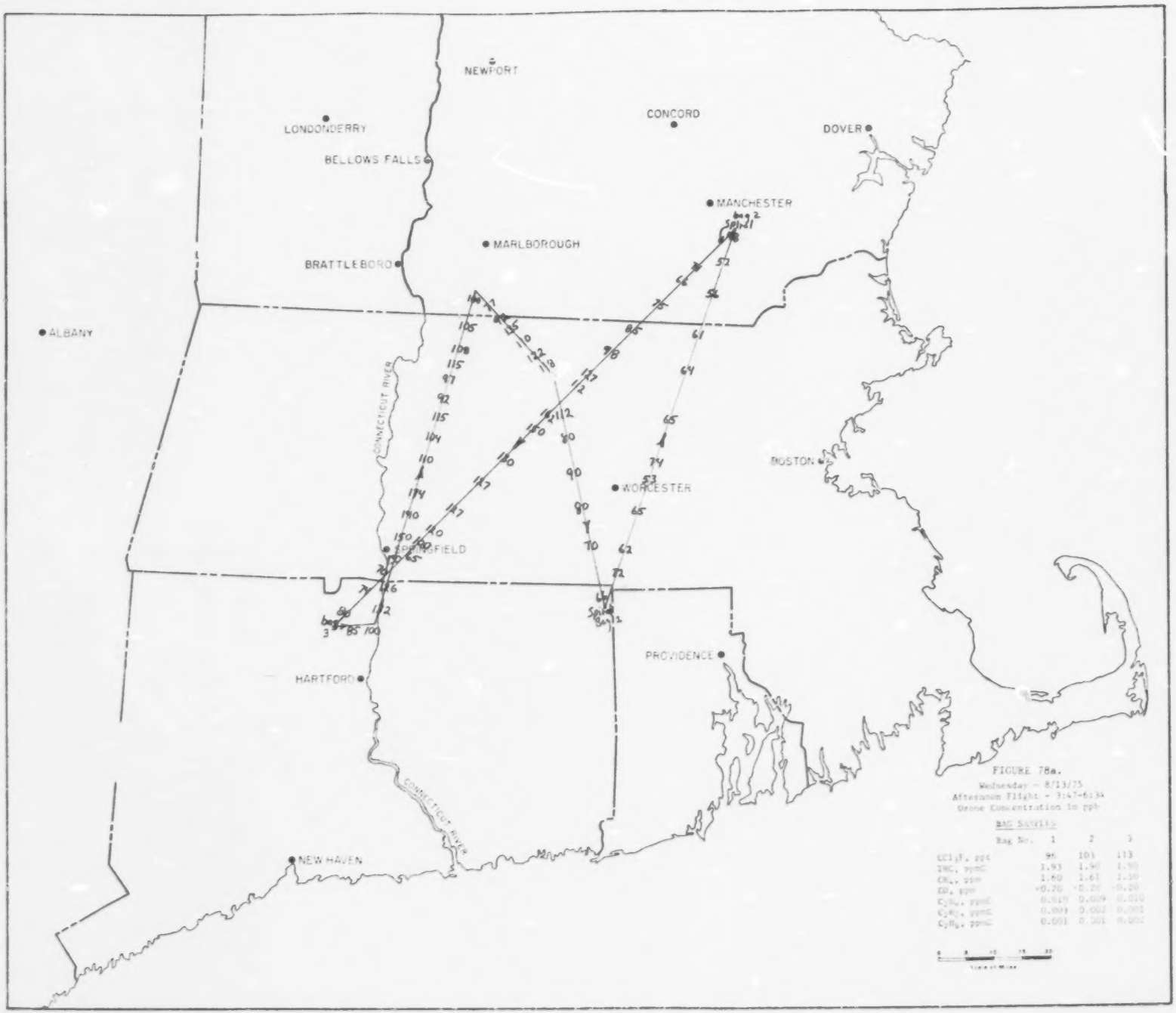


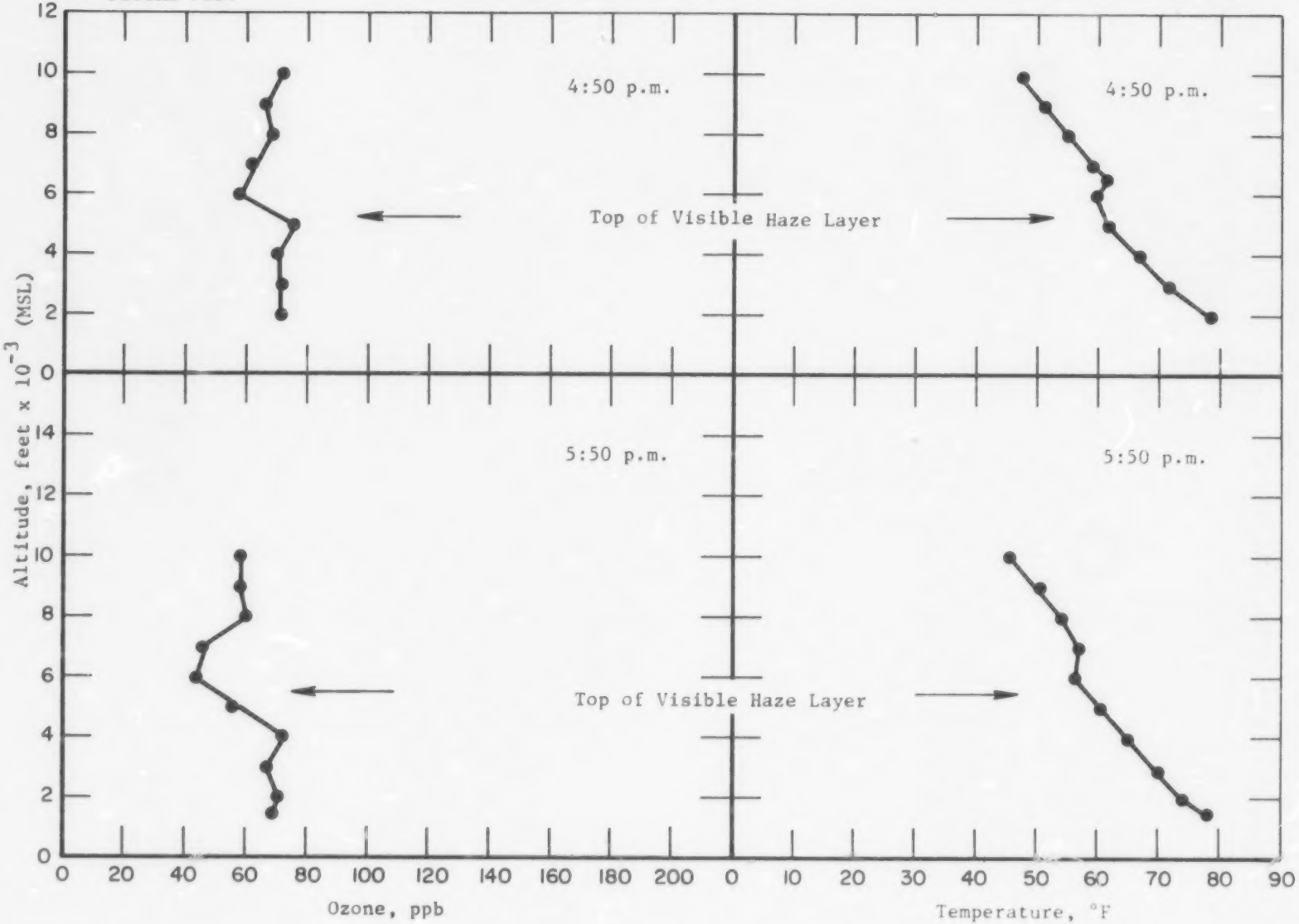
FIGURE 78a.

Wednesday - 8/13/75
Afternoon Flight - 3:47-6:34
Ozone Concentration in ppb

BAG SAMPLE

Bag No.	1	2	3
CCl_3F, ppt	96	101	113
INC, ppmC	1.93	1.90	1.90
CH_4, ppm	1.60	1.61	1.58
CO_2, ppm	<0.20	<0.20	<0.20
C_2H_2, ppmC	0.010	0.009	0.010
C_2H_4, ppmC	0.003	0.002	0.003
C_2H_6, ppmC	0.001	0.001	0.002

FIGURE 78b. Vertical Profiles August 13, 1975



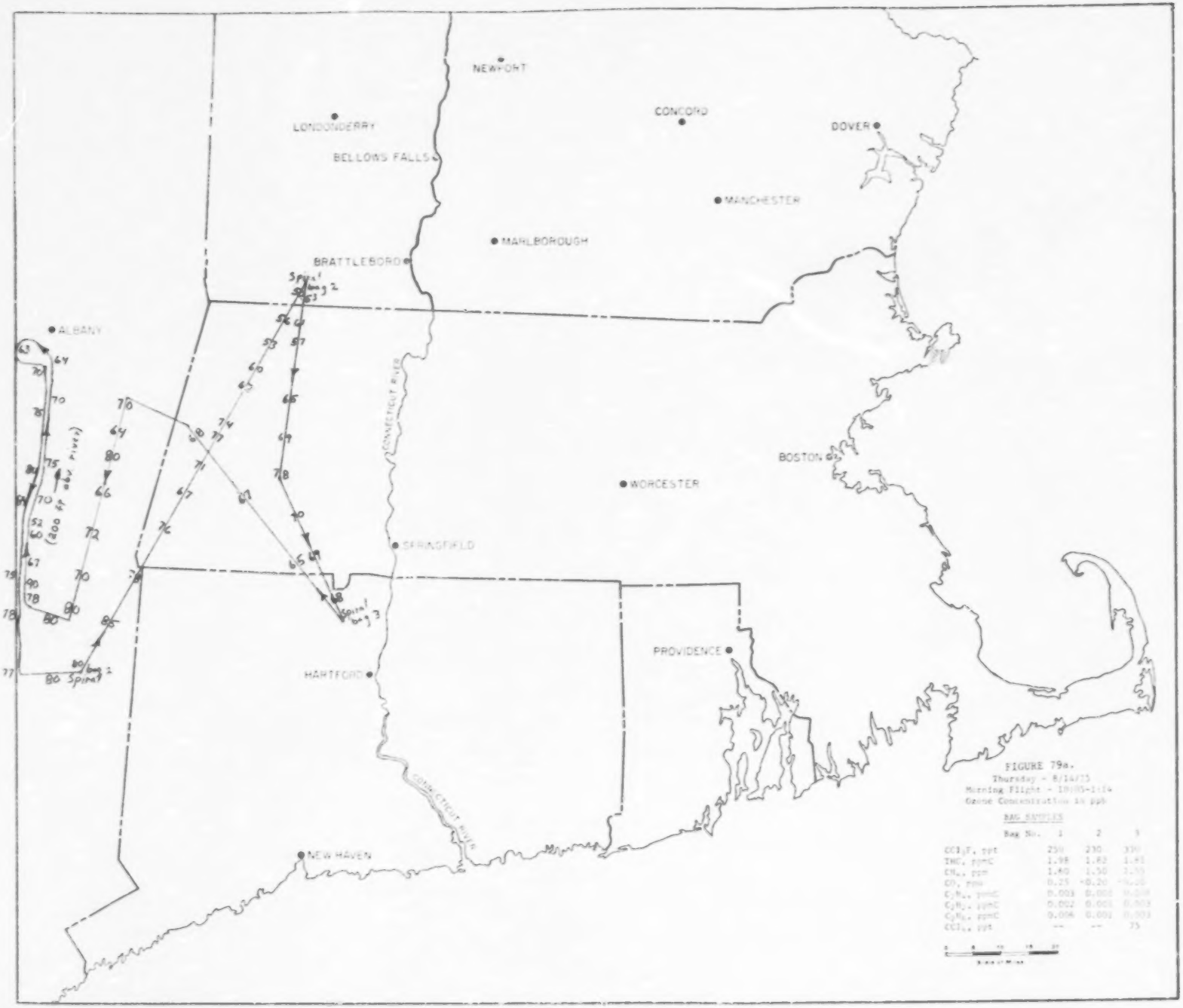


FIGURE 79a.
Thursday - 8/14/75
Morning Flight - 1005-1114
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	250	230	330
CH_4, ppmC	1.98	1.82	1.91
CH_4, ppm	1.40	1.50	1.50
CO, ppm	0.25	<0.20	<0.20
C_2H_2, ppmC	0.001	0.001	0.001
C_2H_6, ppmC	0.002	0.001	0.001
C_3H_8, ppmC	0.004	0.001	0.001
CCl_4, ppt	--	--	75

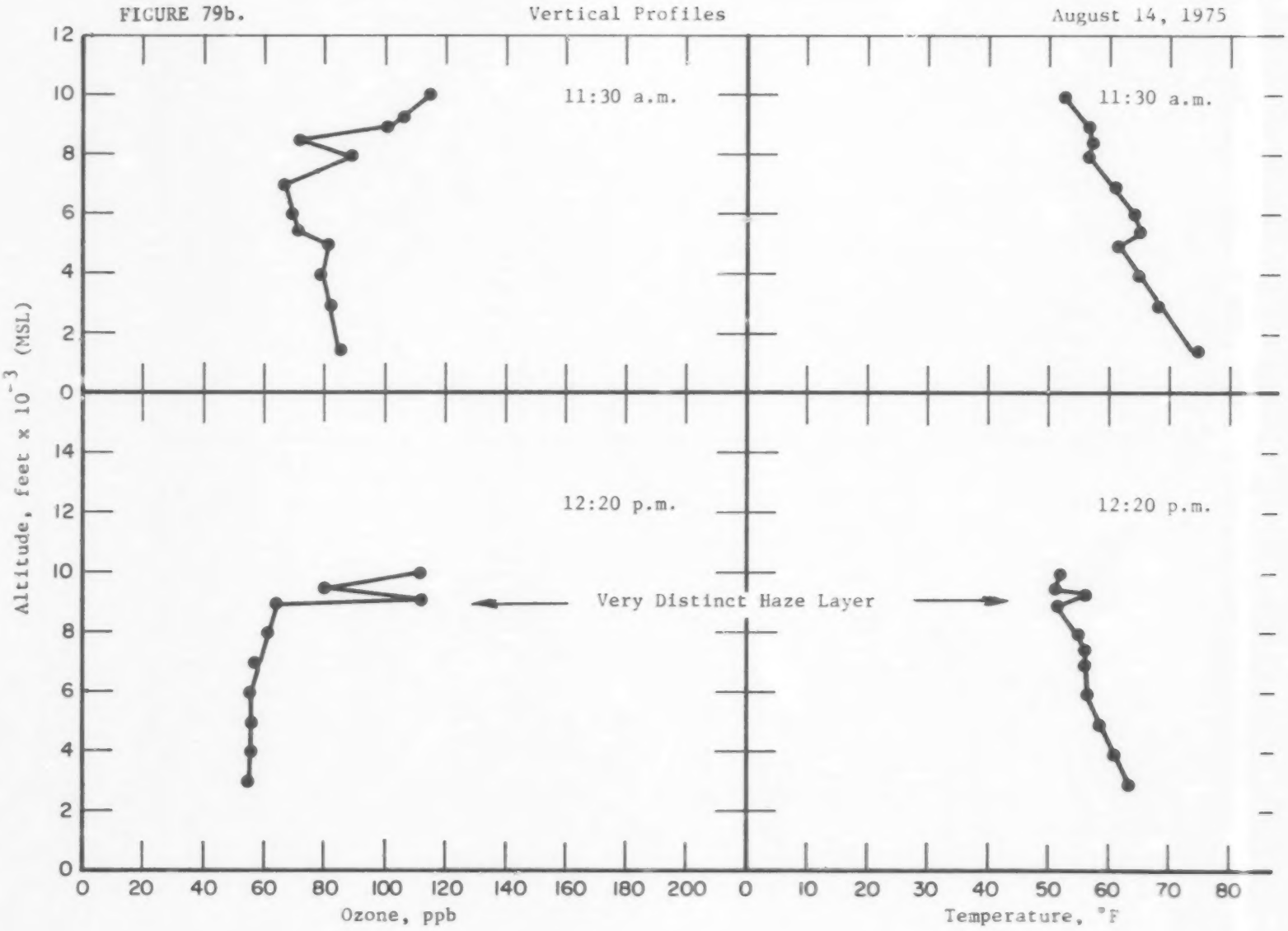
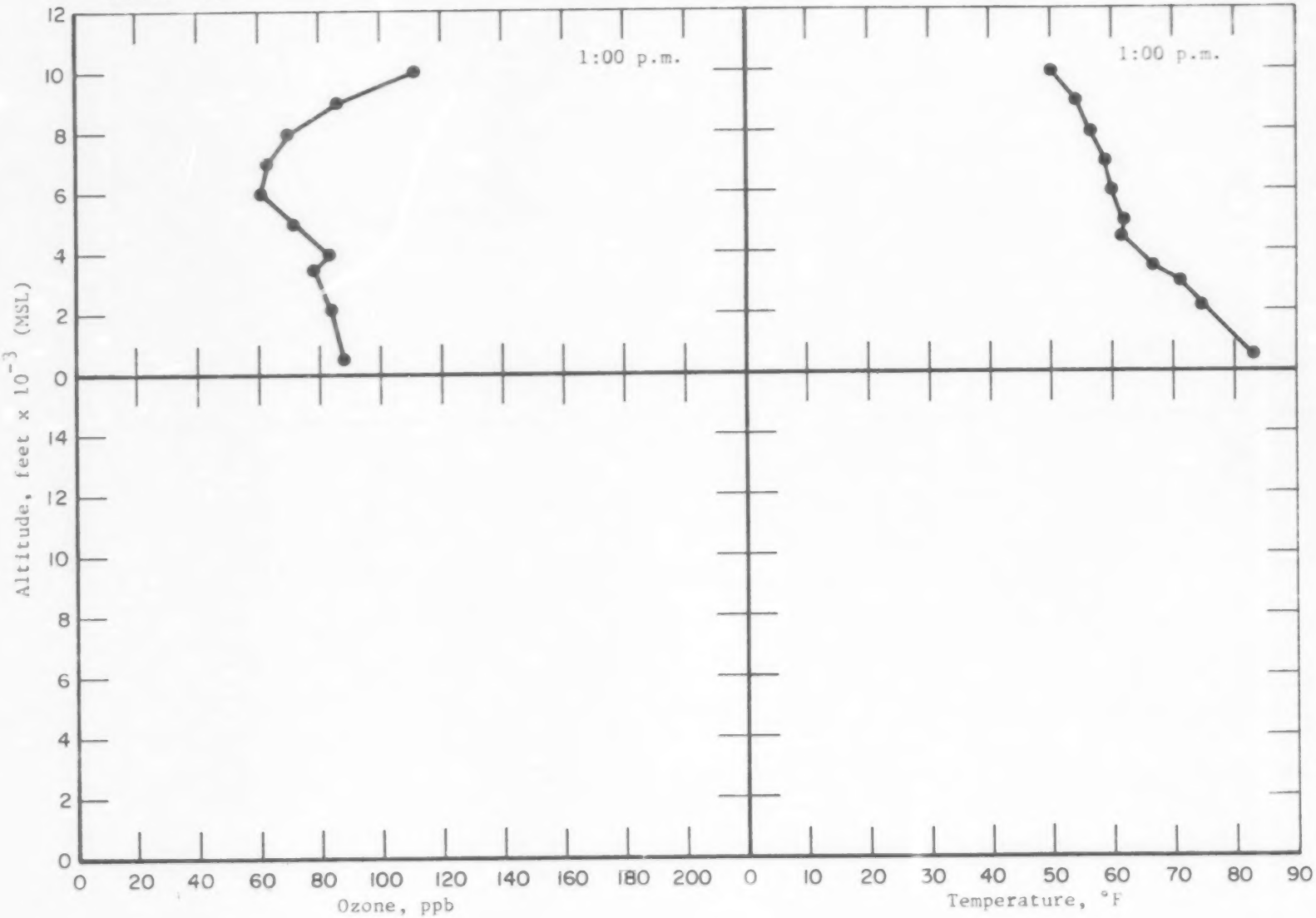


FIGURE 79b.
Vertical Profiles
August 14, 1975
11:30 a.m.
11:30 a.m.
12:20 p.m.
12:20 p.m.
Very Distinct Haze Layer
Altitude, feet x 10^{-3} (MSL)
Ozone, ppb
Temperature, °F
0 20 40 60 80 100 120 140 160 180 200
0 10 20 30 40 50 60 70 80
0 2 4 6 8 10 12 14

FIGURE 79c. Vertical Profiles August 14, 1975



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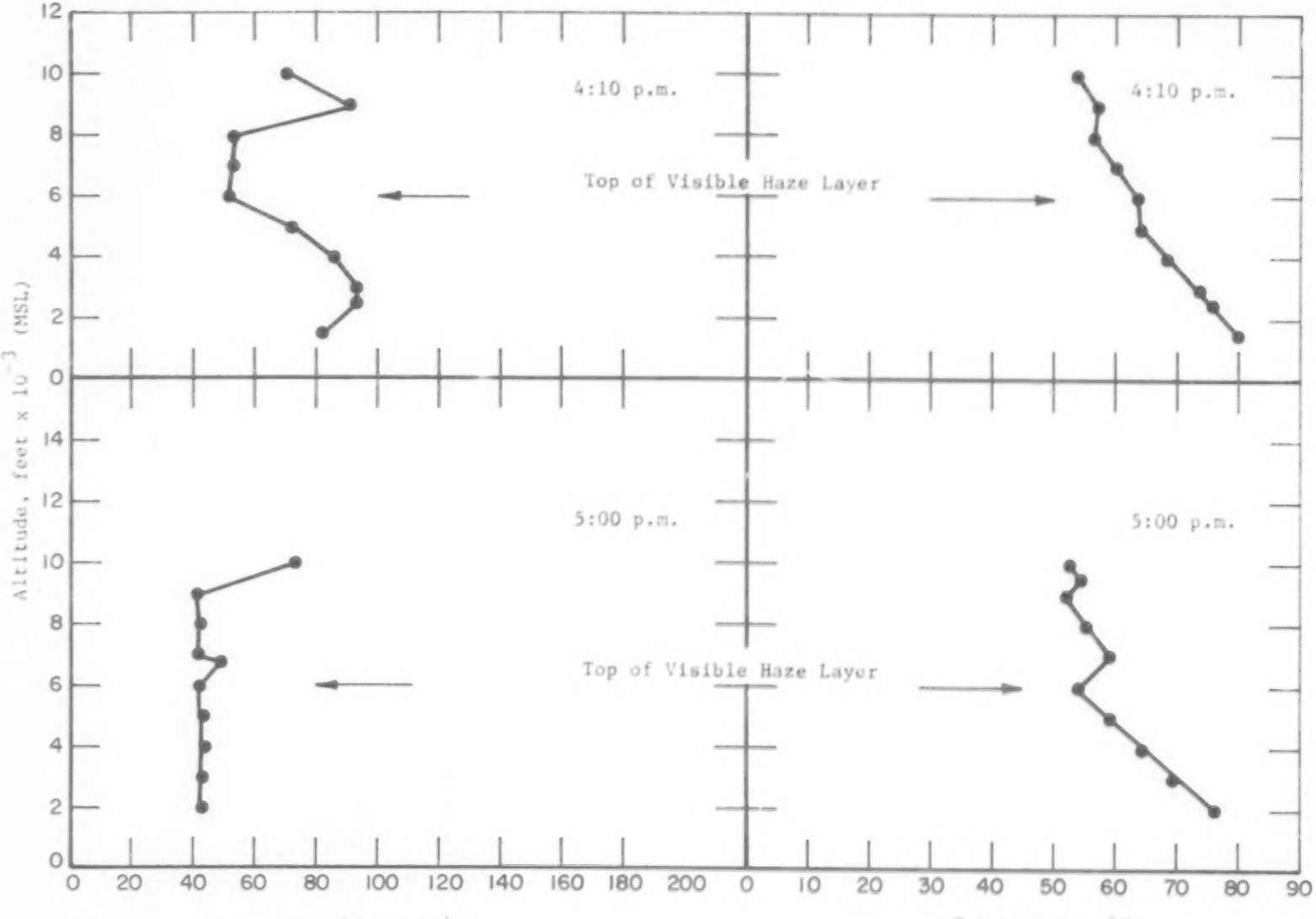
CONCORD
DOVER
BELLOWS FALLS
MANCHESTER
MARLBOROUGH
BRATTLEBORO
ALBANY
CONNECTICUT RIVER
BOSTON
WORCESTER
SPRINGFIELD
PROVIDENCE
HARTFORD
CONNECTICUT RIVER
NEW HAVEN

FIGURE 80b. Vertical Profiles August 14, 1975



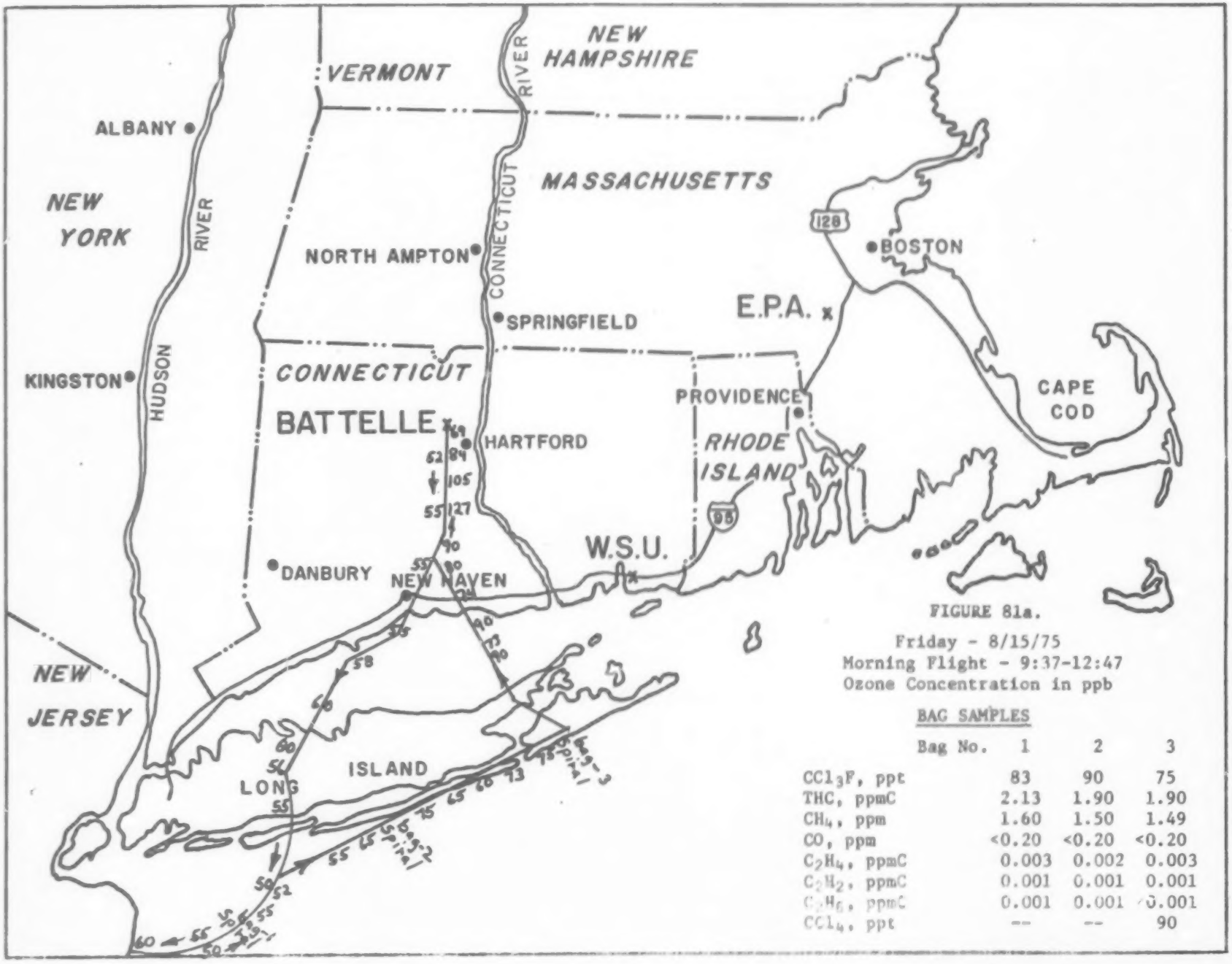


FIGURE 81a.

Friday - 8/15/75
Morning Flight - 9:37-12:47
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	83	90	75
THC, ppmC	2.13	1.90	1.90
CH_4, ppm	1.60	1.50	1.49
CO, ppm	<0.20	<0.20	<0.20
C_2H_4, ppmC	0.003	0.002	0.003
C_2H_2, ppmC	0.001	0.001	0.001
C_2H_6, ppmC	0.001	0.001	<0.001
CCl_4, ppt	--	--	90

FIGURE 81b. Vertical Profiles August 15, 1975

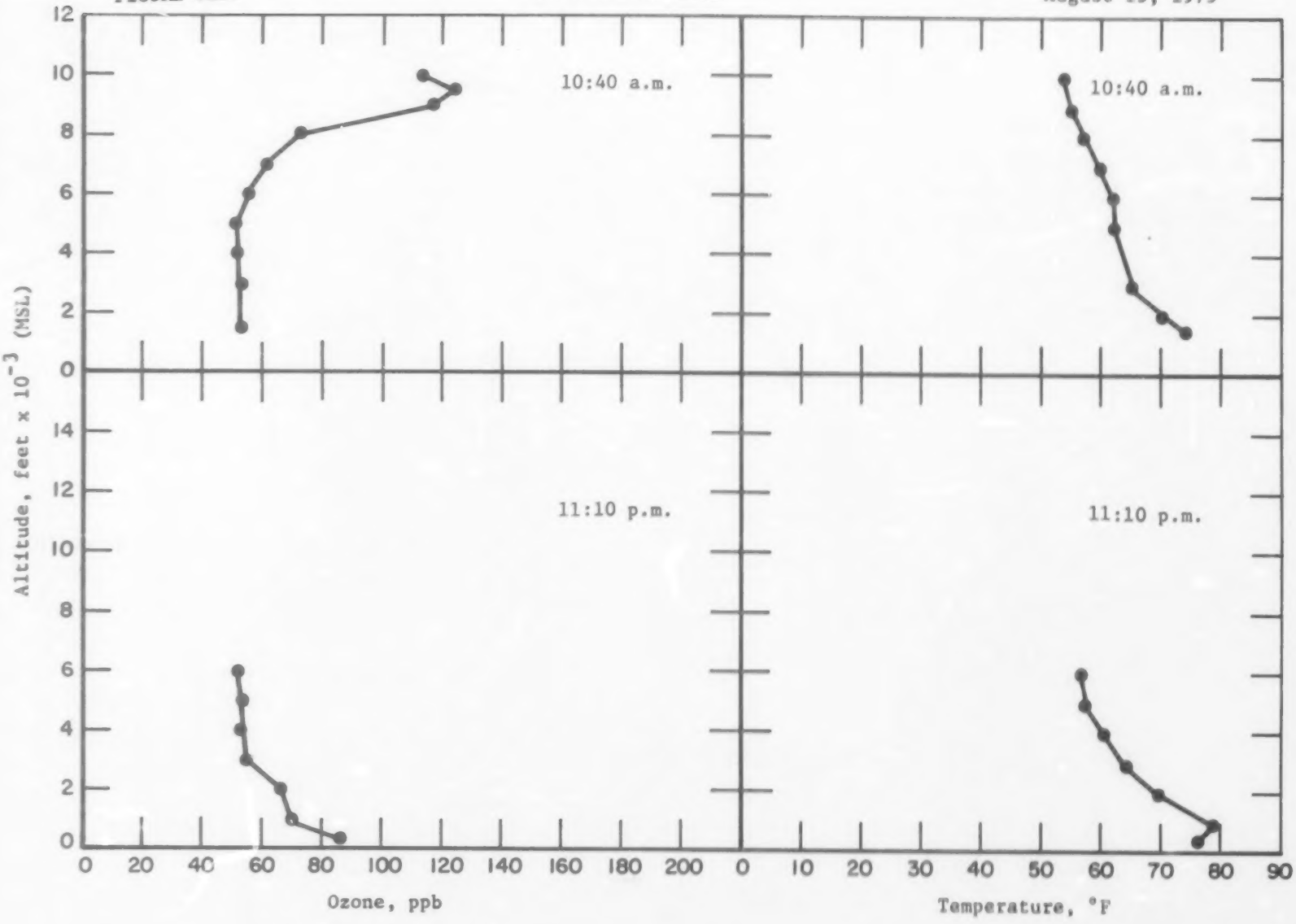
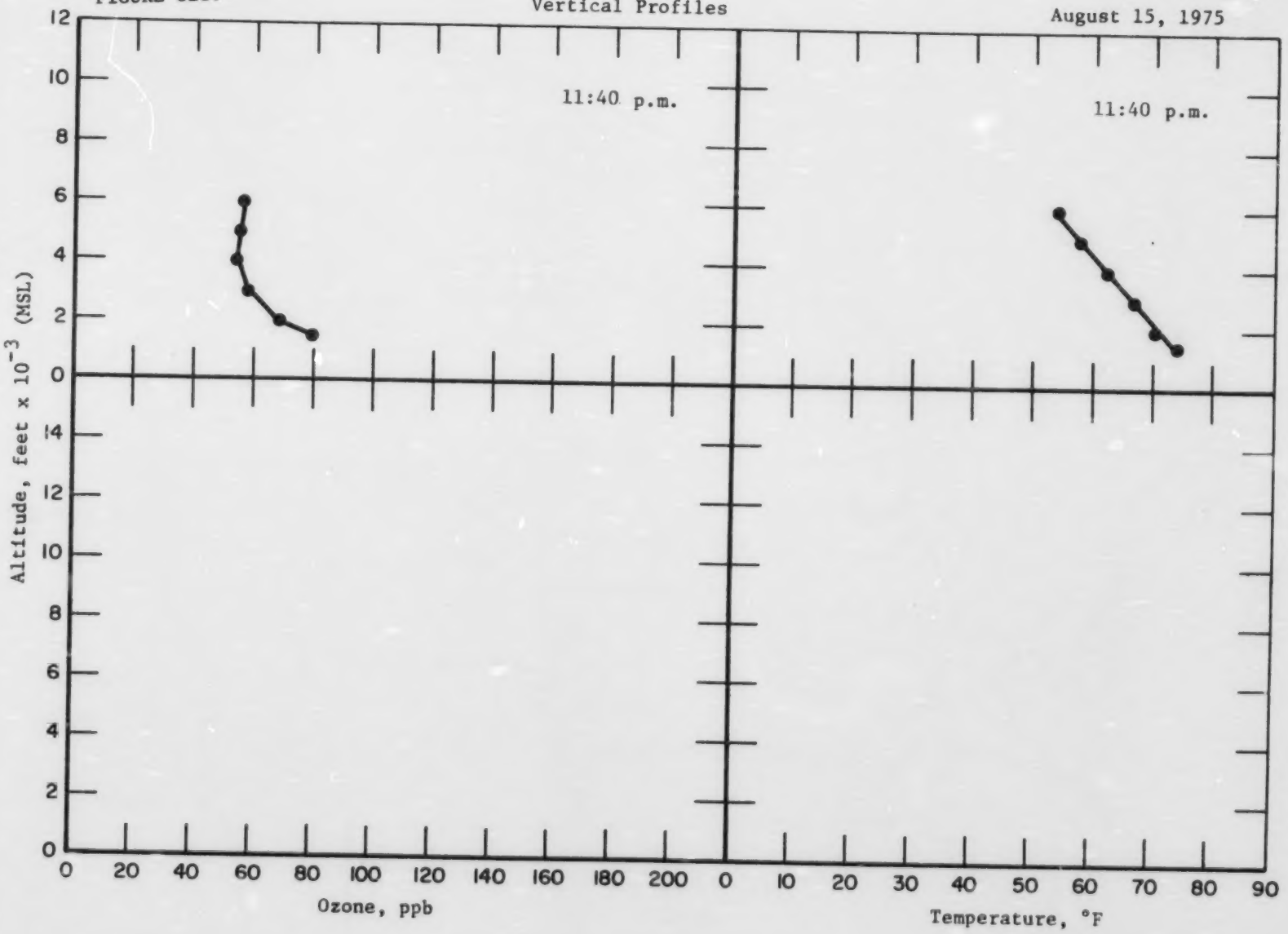


FIGURE 81c.


Vertical Profiles
August 15, 1975
11:40 p.m.
11:40 p.m.
Altitude, feet x 10^{-3} (MSL)
12
10
8
6
4
2
0
14
12
10
8
6
4
2
0
0 20 40 60 80 100 120 140 160 180 200
Ozone, ppb
0 10 20 30 40 50 60 70 80 90
Temperature, °F

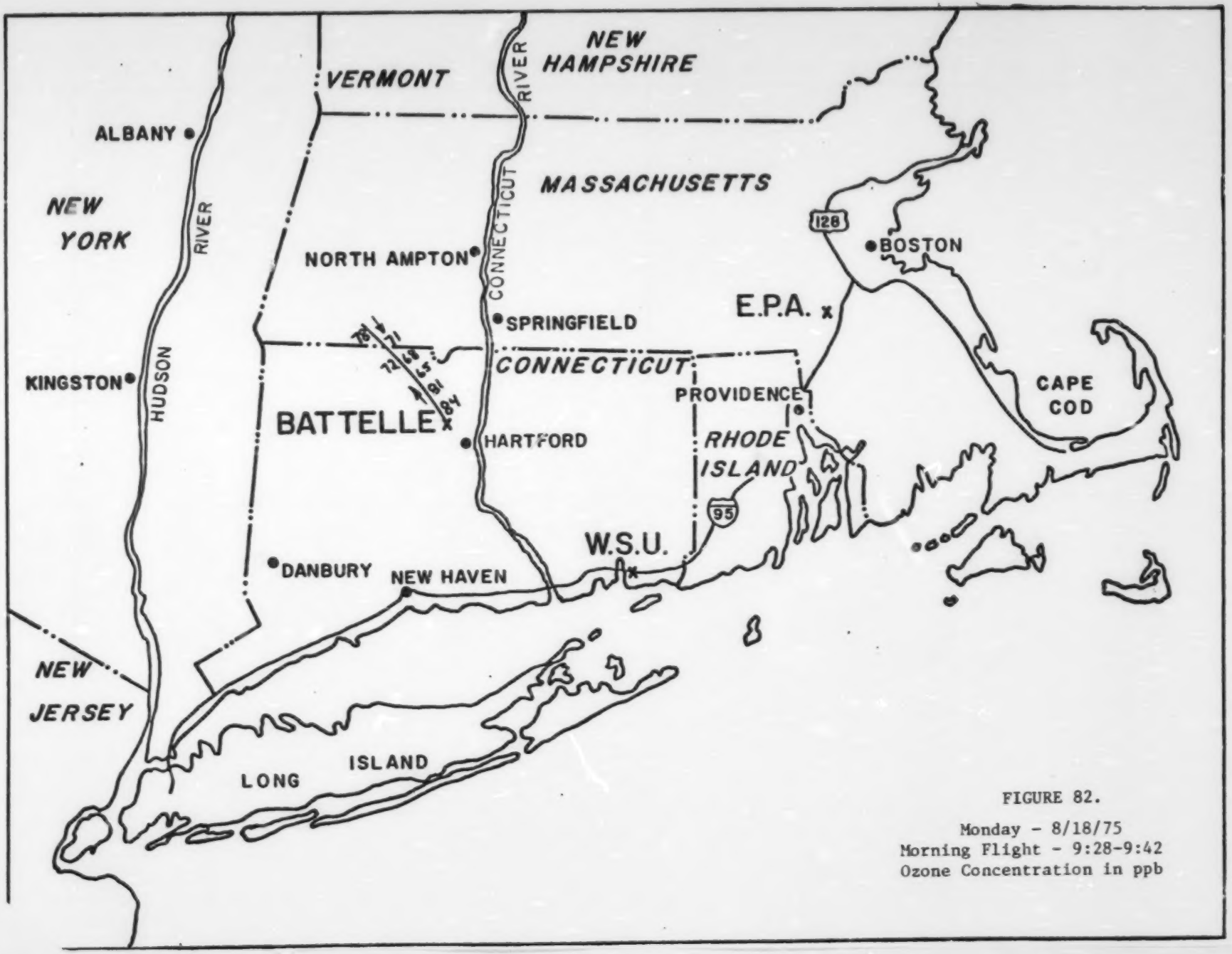


FIGURE 82.

Monday - 8/18/75
Morning Flight - 9:28-9:42
Ozone Concentration in ppb

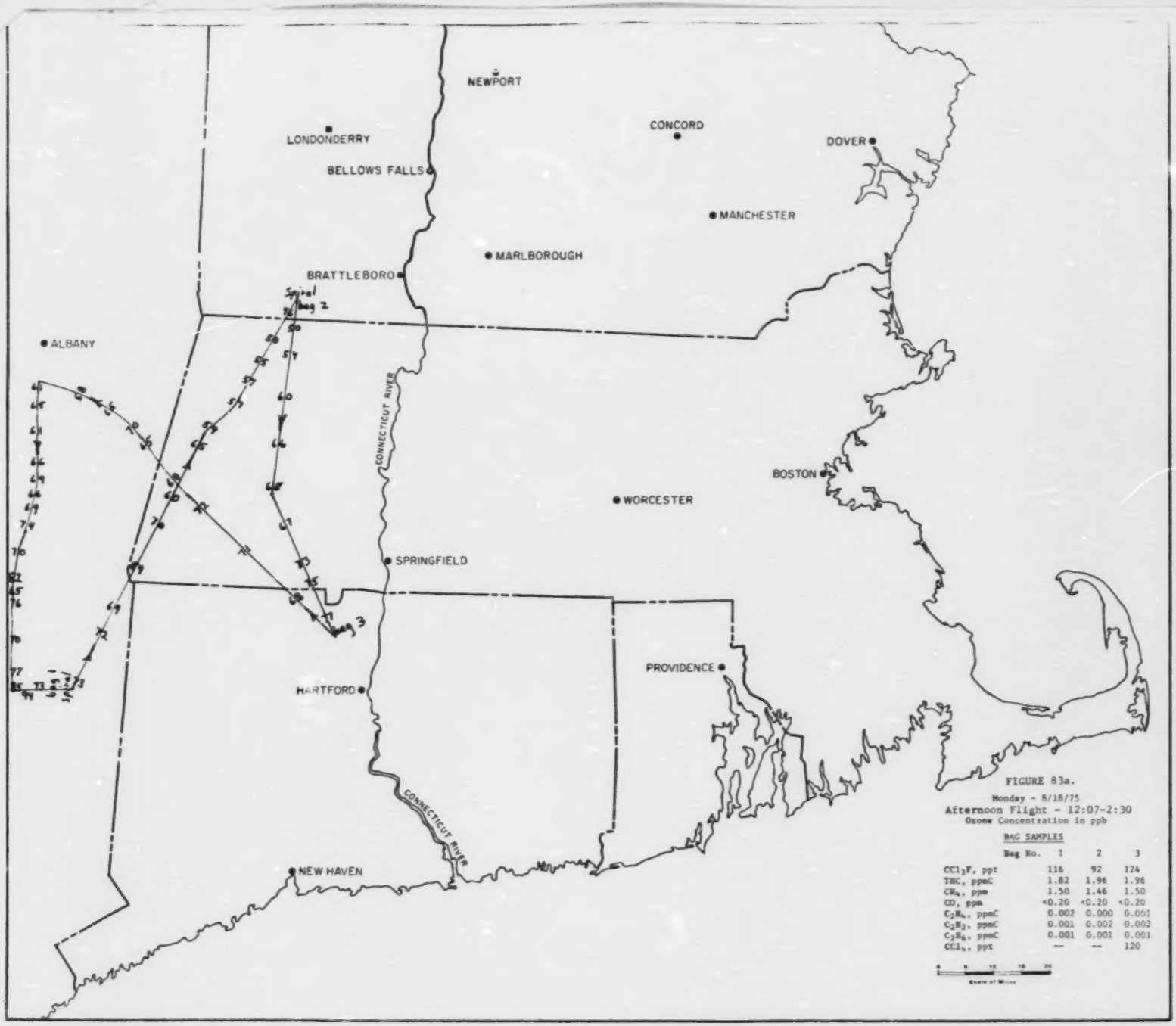


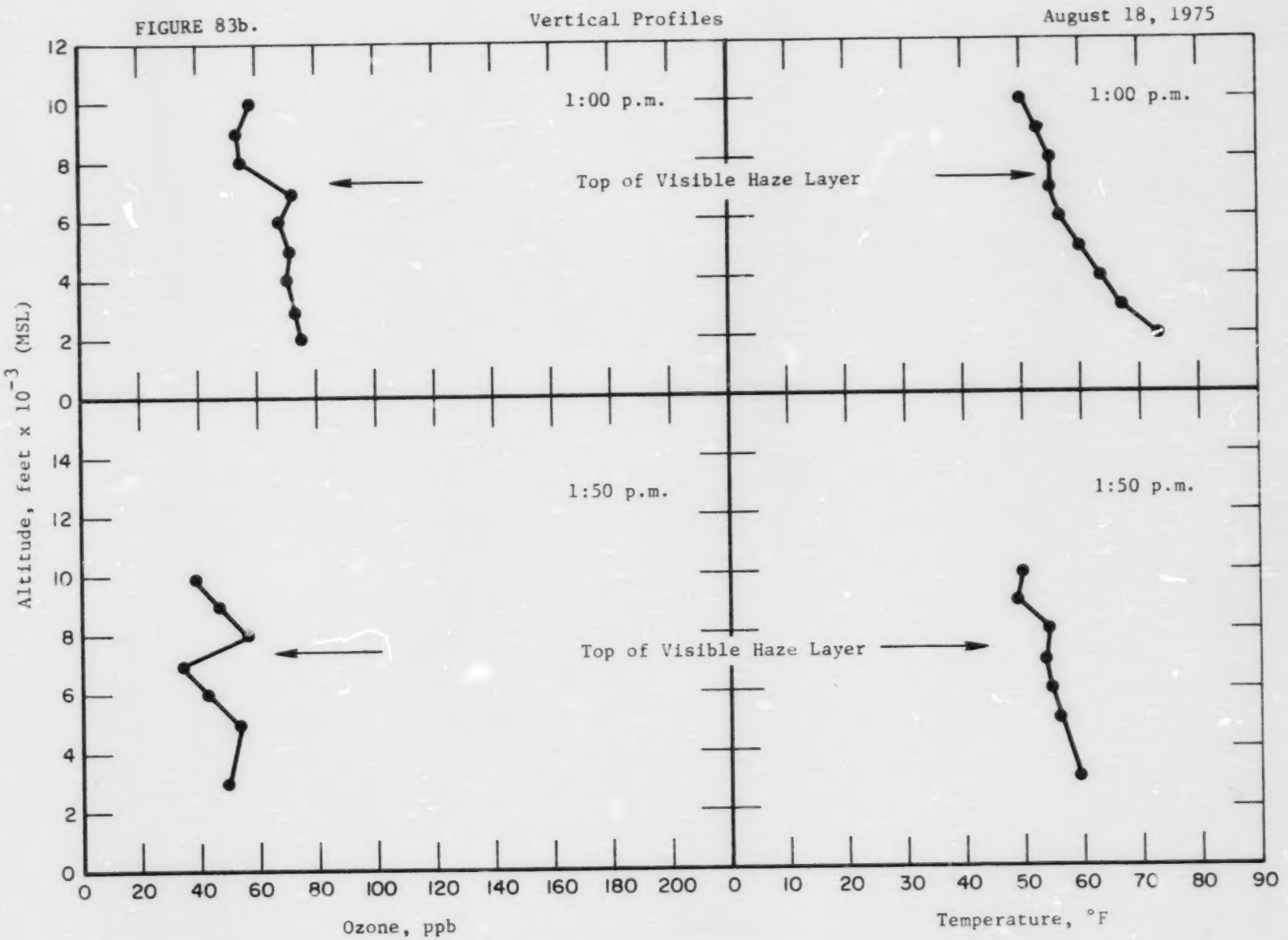
FIGURE 83a.

Monday - 8/18/75
Afternoon Flight - 12:07-2:30
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	116	92	124
THC, ppmC	1.82	1.96	1.96
CH_4, ppm	1.50	1.46	1.50
CO, ppm	<0.20	<0.20	<0.20
C_2H_4, ppmC	0.002	0.000	0.001
C_2H_2, ppmC	0.001	0.002	0.002
C_2H_6, ppmC	0.001	0.001	0.001
CCl_4, ppt	--	--	120

FIGURE 83b. Vertical Profiles August 18, 1975



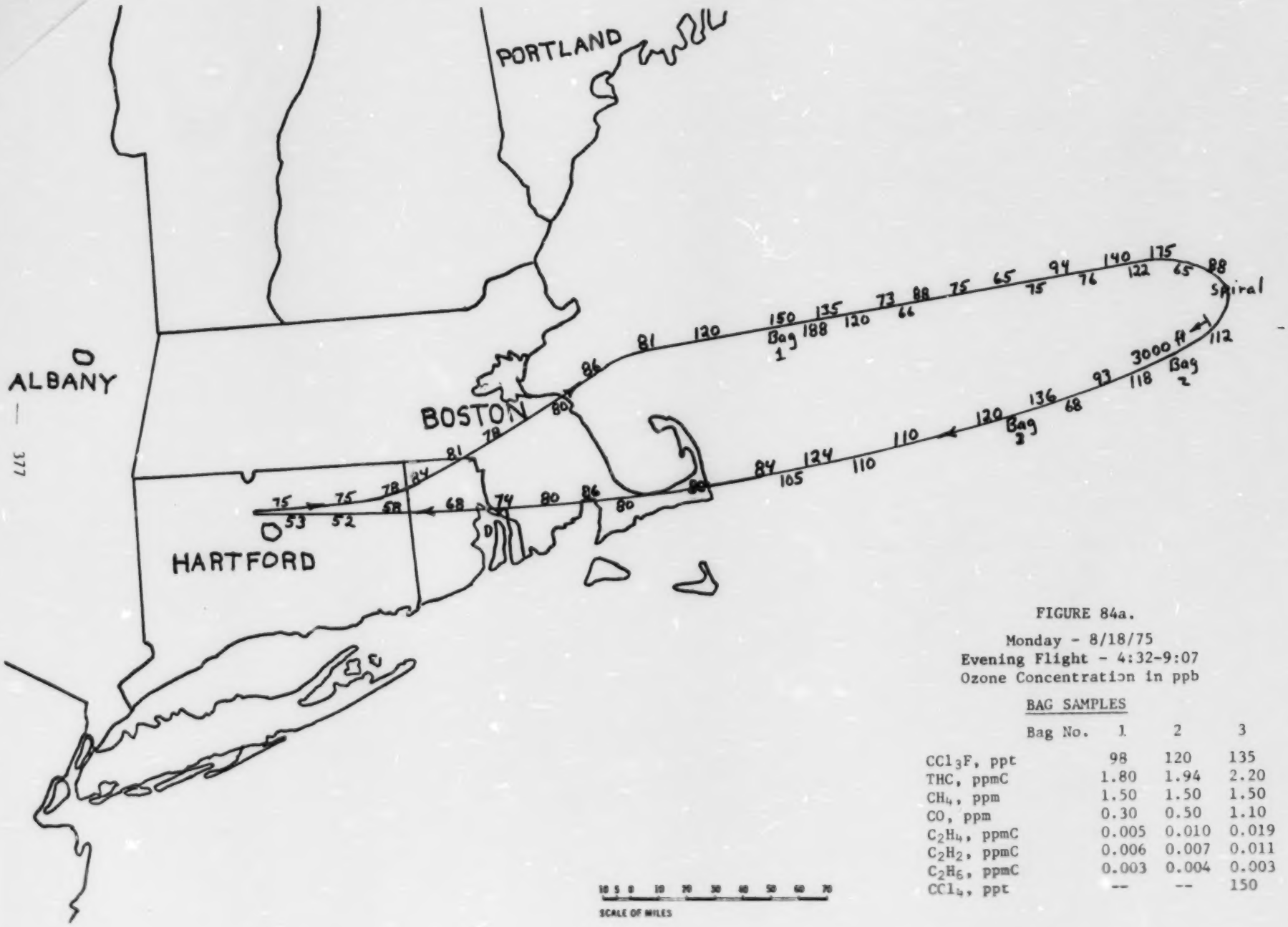


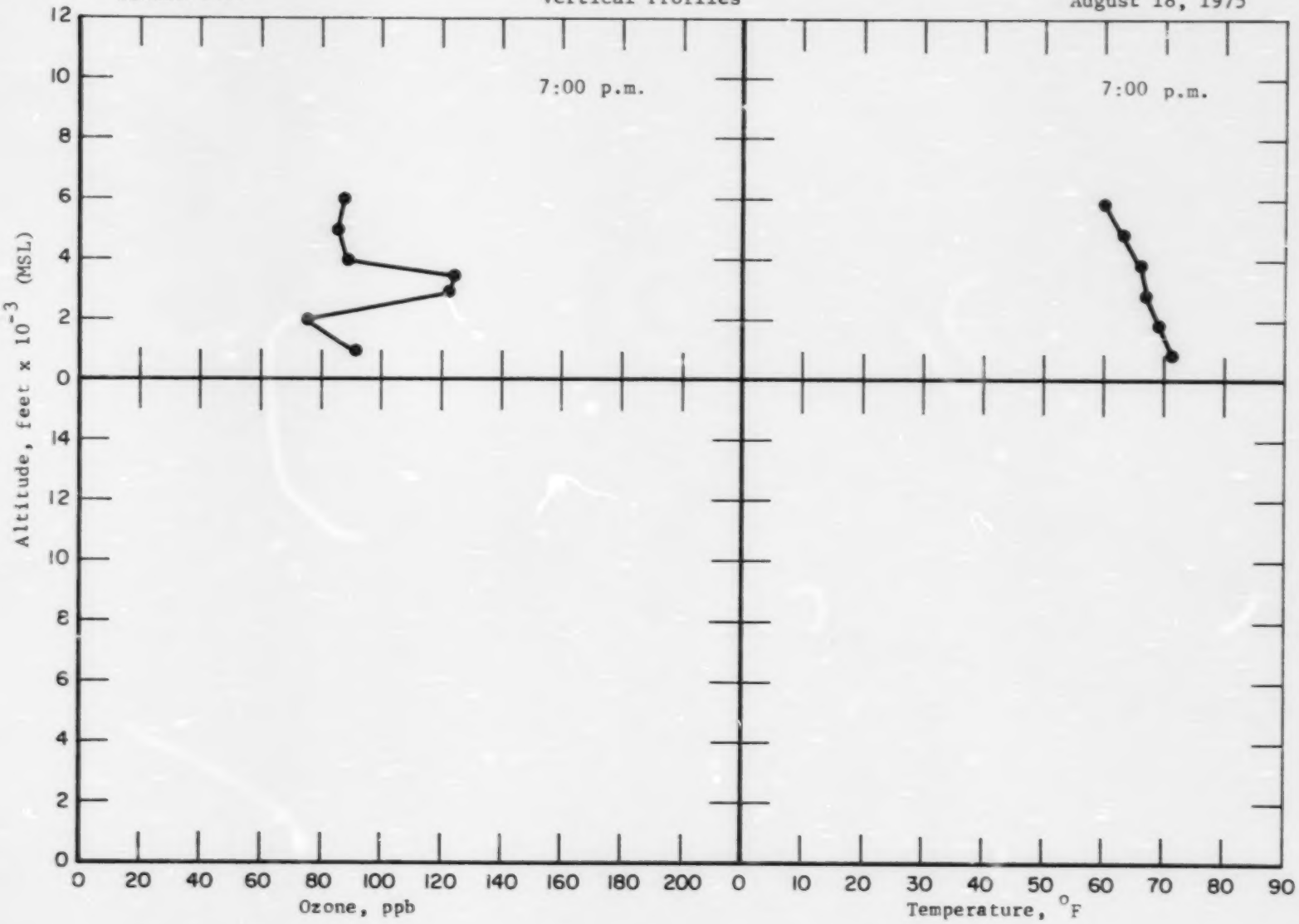
FIGURE 84a.

Monday - 8/18/75
Evening Flight - 4:32-9:07
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	98	120	135
THC, ppmC	1.80	1.94	2.20
CH_4, ppm	1.50	1.50	1.50
CO, ppm	0.30	0.50	1.10
C_2H_4, ppmC	0.005	0.010	0.019
C_2H_2, ppmC	0.006	0.007	0.011
C_2H_6, ppmC	0.003	0.004	0.003
CCl_4, ppt	--	--	150

FIGURE 84b. Vertical Profiles August 18, 1975



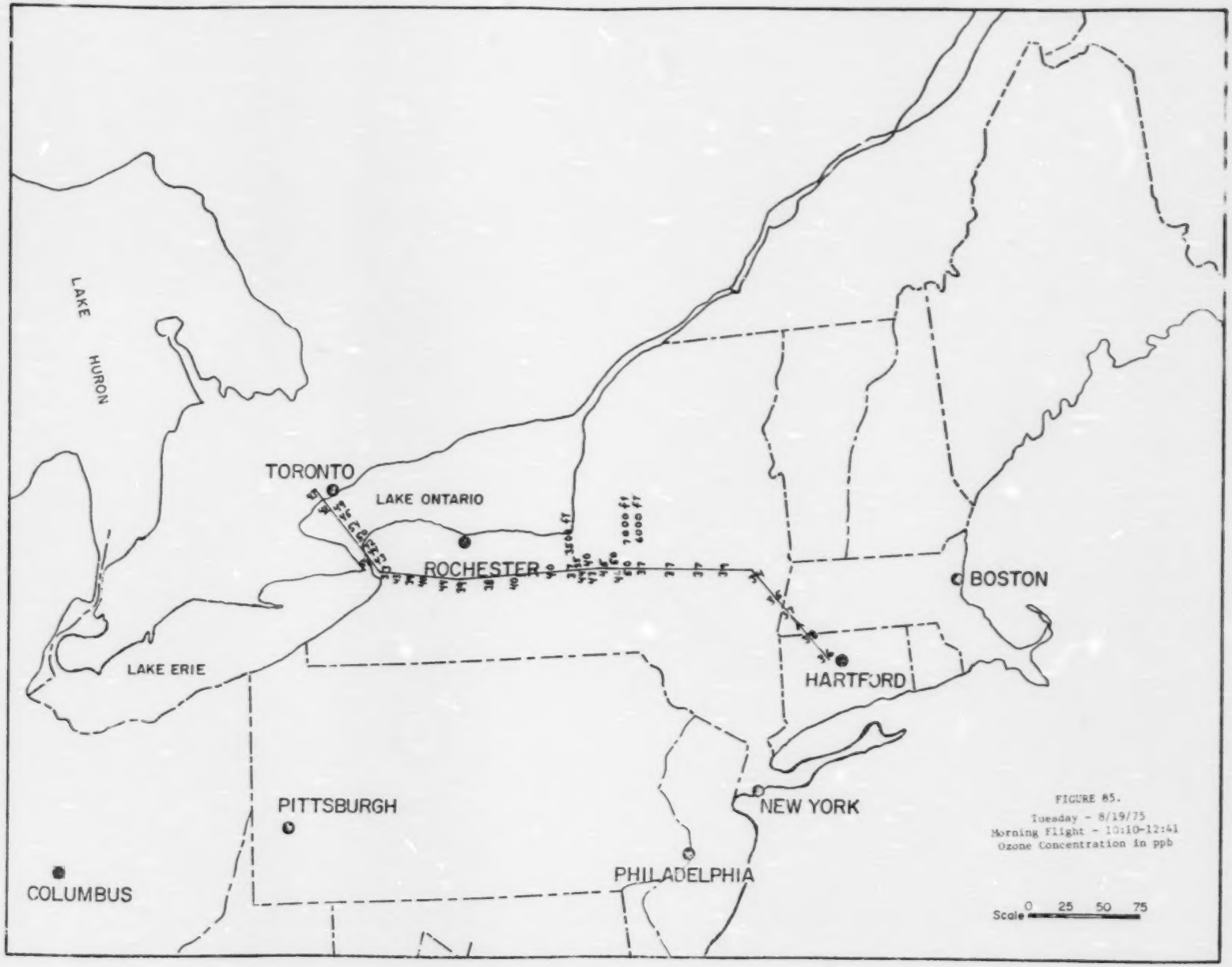


FIGURE 85.

Tuesday - 8/19/75
Morning Flight - 10:10-12:41
Ozone Concentration in ppb

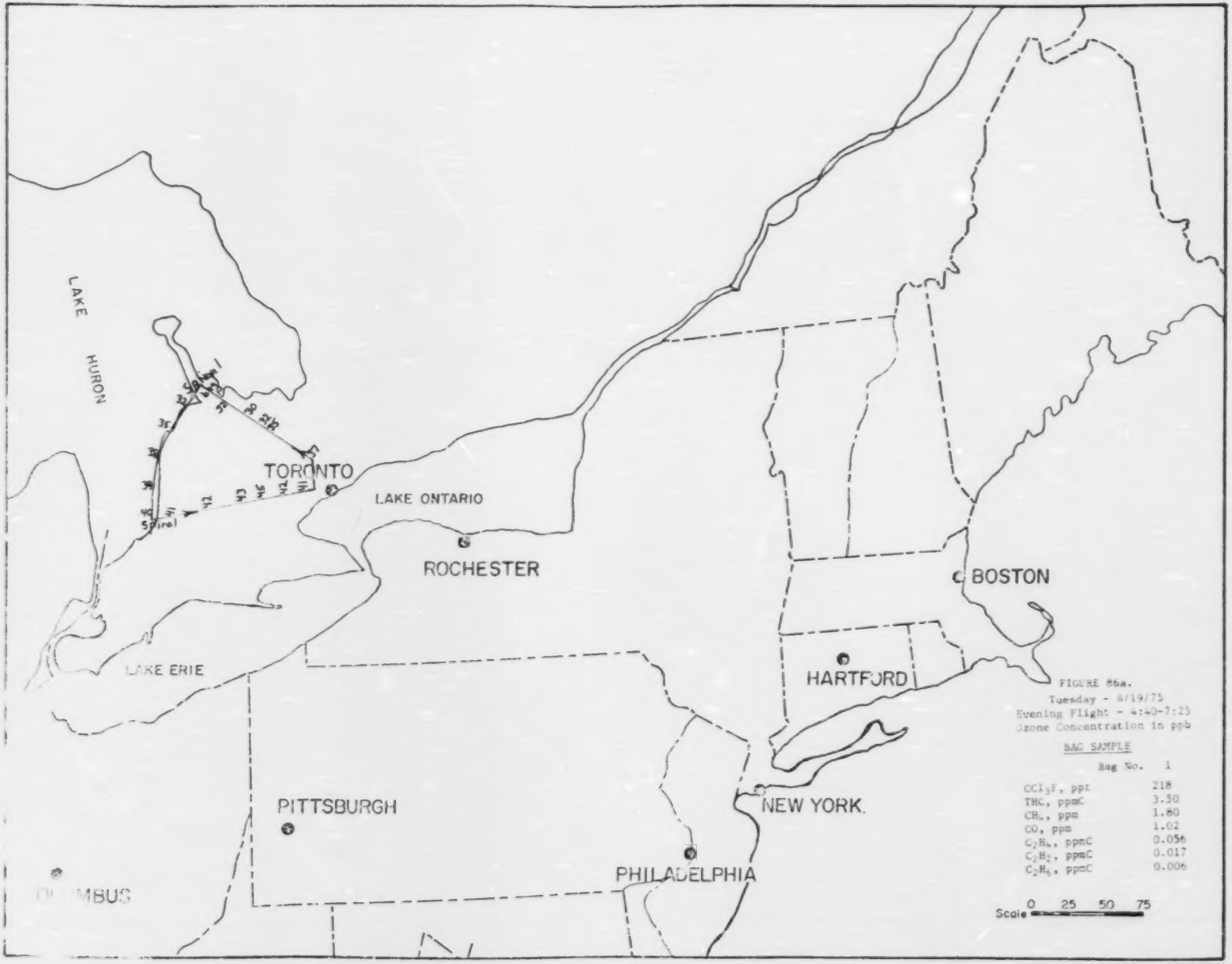
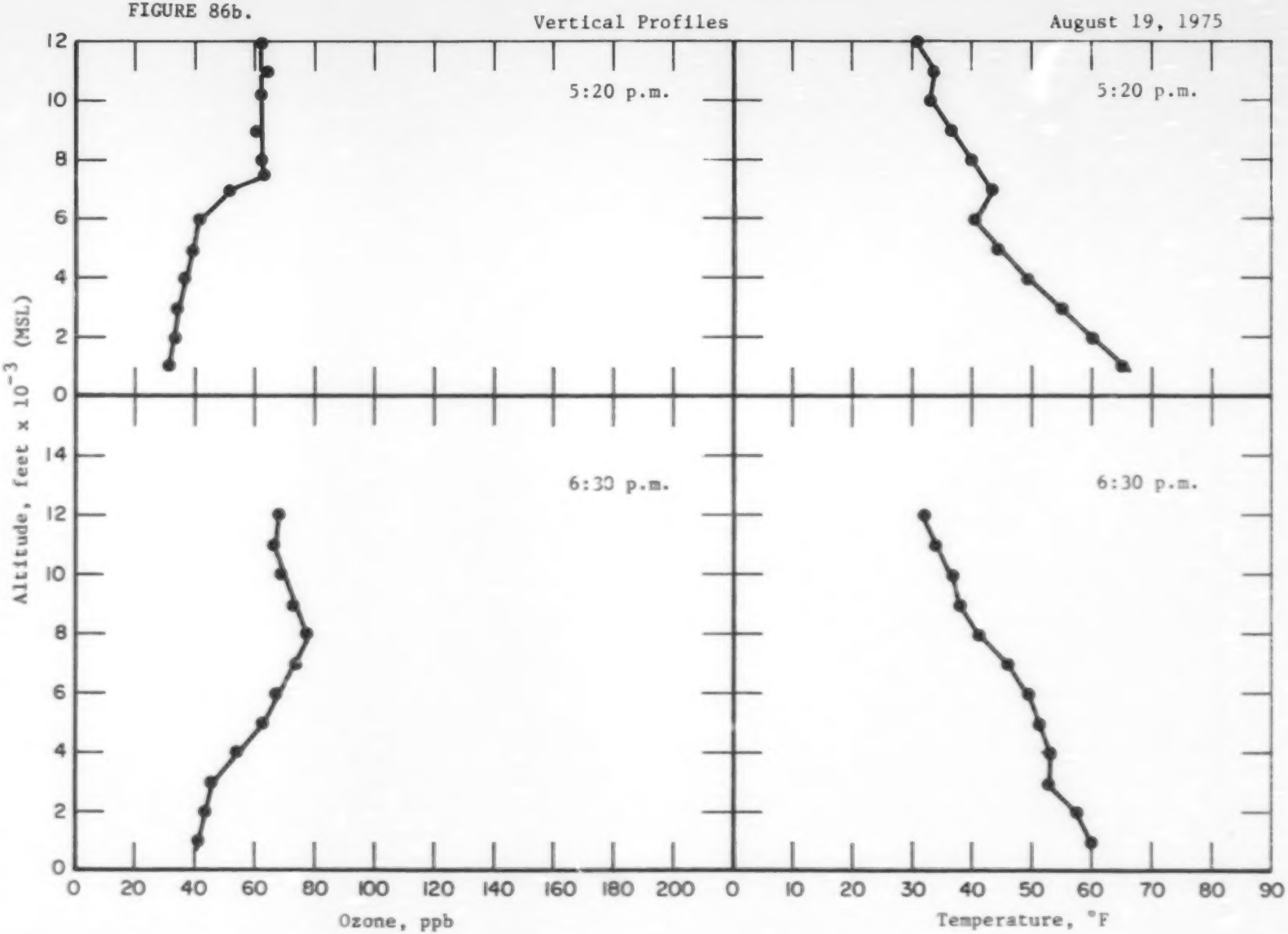

LAKE HURON
TORONTO
LAKE ONTARIO
ROCHESTER
BOSTON
LAKE ERIE
HARTFORD
PITTSBURGH
NEW YORK
PHILADELPHIA
Spiral
FIGURE 8ba.
Tuesday - 8/19/75
Evening Flight - 4:40-7:25
Ozone Concentration in ppb
BAG SAMPLE
Bag No. 1
CCl_3F, ppt 218
THC, ppmC 3.50
CH_4, ppm 1.80
CO, ppm 1.02
C_2H_4, ppmC 0.056
C_2H_2, ppmC 0.017
C_2H_6, ppmC 0.006
Scale 0 25 50 75

FIGURE 86b.


Vertical Profiles
August 19, 1975
5:20 p.m.
5:20 p.m.
6:30 p.m.
6:30 p.m.
Altitude, feet x 10^{-3} (MSL)
0
2
4
6
8
10
12
14
0 20 40 60 80 100 120 140 160 180 200
Ozone, ppb
0 10 20 30 40 50 60 70 80 90
Temperature, °F

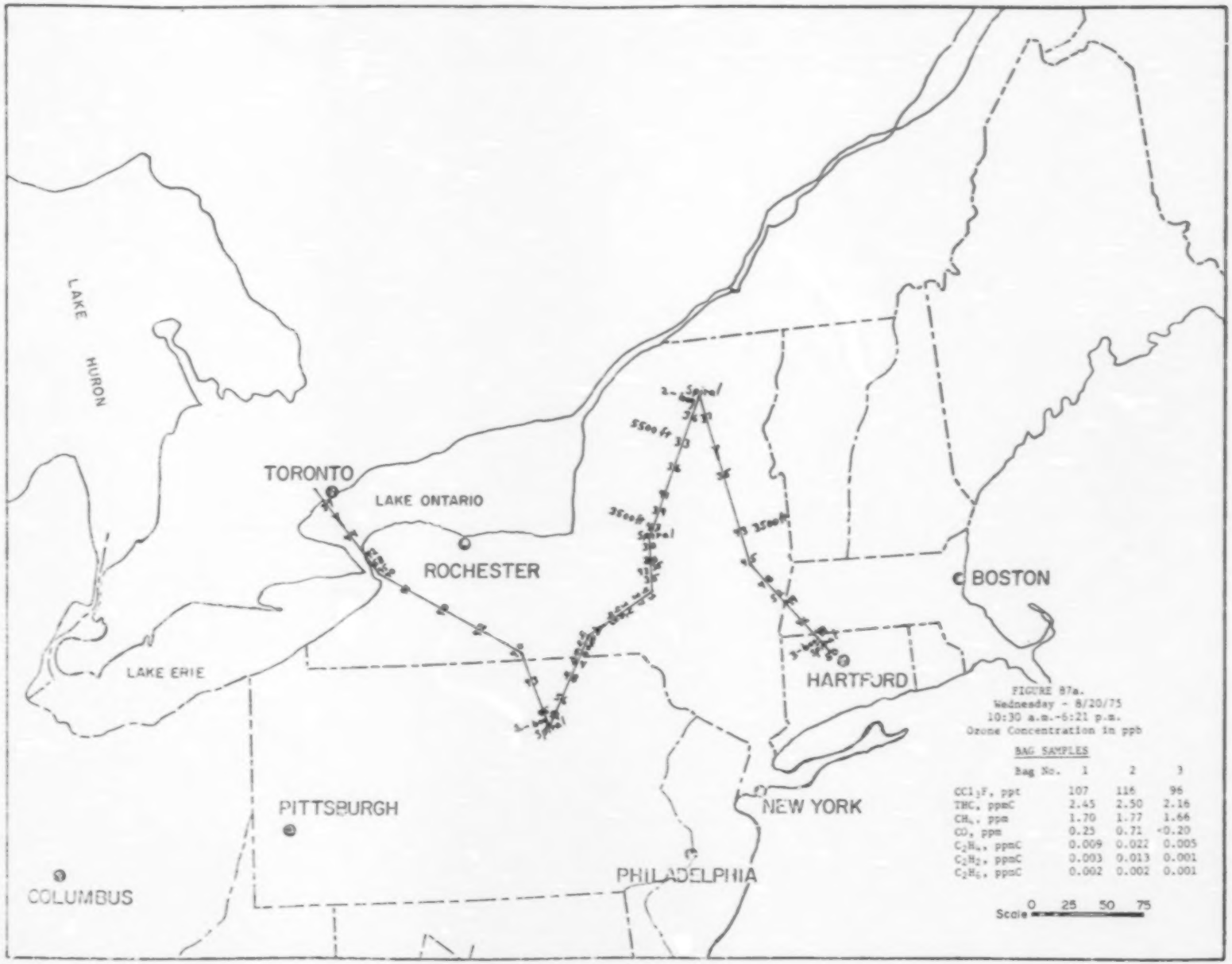


FIGURE 87a.
Wednesday - 8/20/75
10:30 a.m.-6:21 p.m.
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2	3
CCl_3F, ppt	107	116	96
THC, ppmC	2.45	2.50	2.16
CH_4, ppm	1.70	1.77	1.66
CO, ppm	0.23	0.71	<0.20
C_2H_4, ppmC	0.009	0.022	0.005
C_2H_2, ppmC	0.003	0.013	0.001
C_2H_6, ppmC	0.002	0.002	0.001

FIGURE 87b. Vertical Profiles August 20, 1975

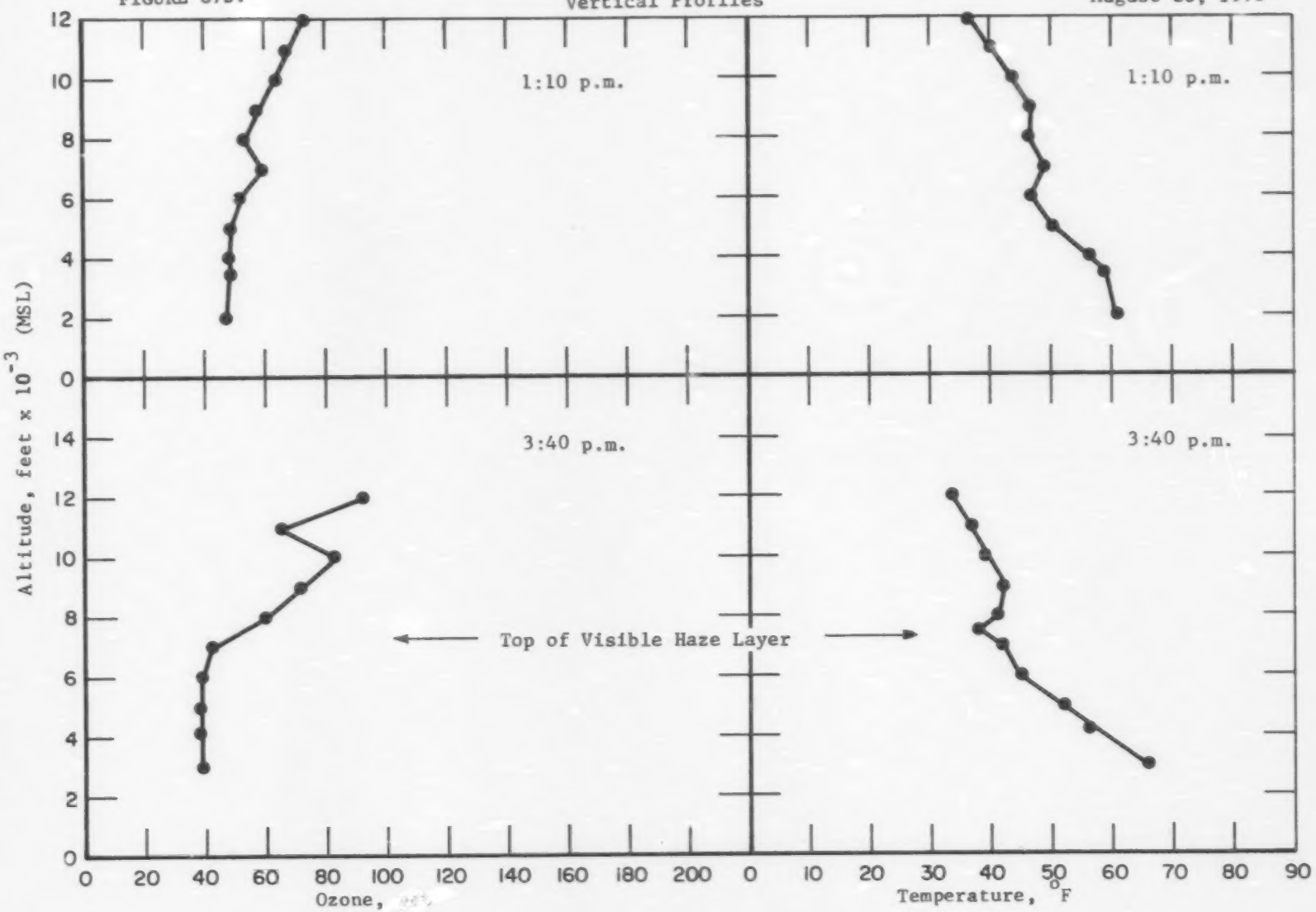
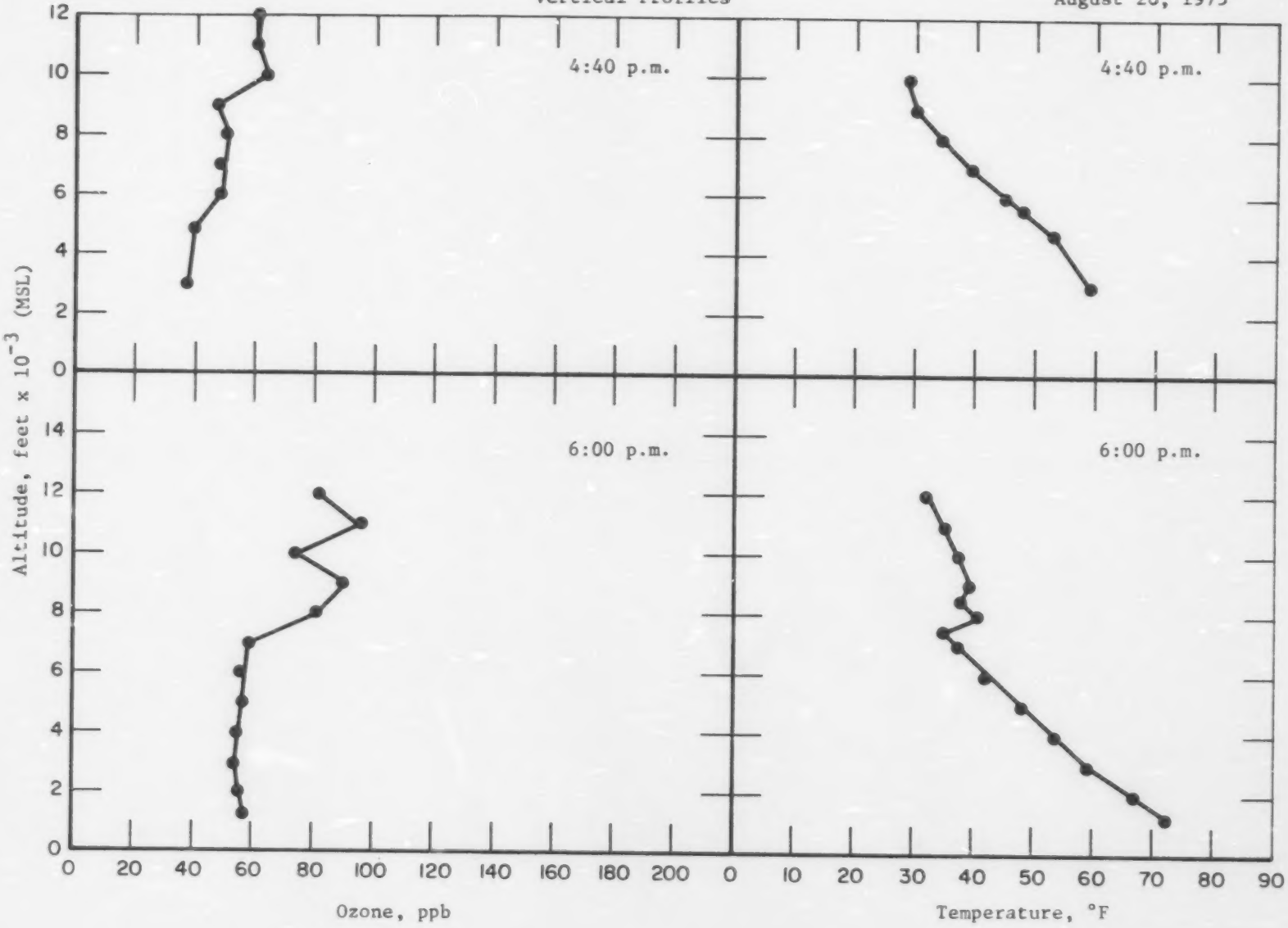


FIGURE 87c. Vertical Profiles August 20, 1975



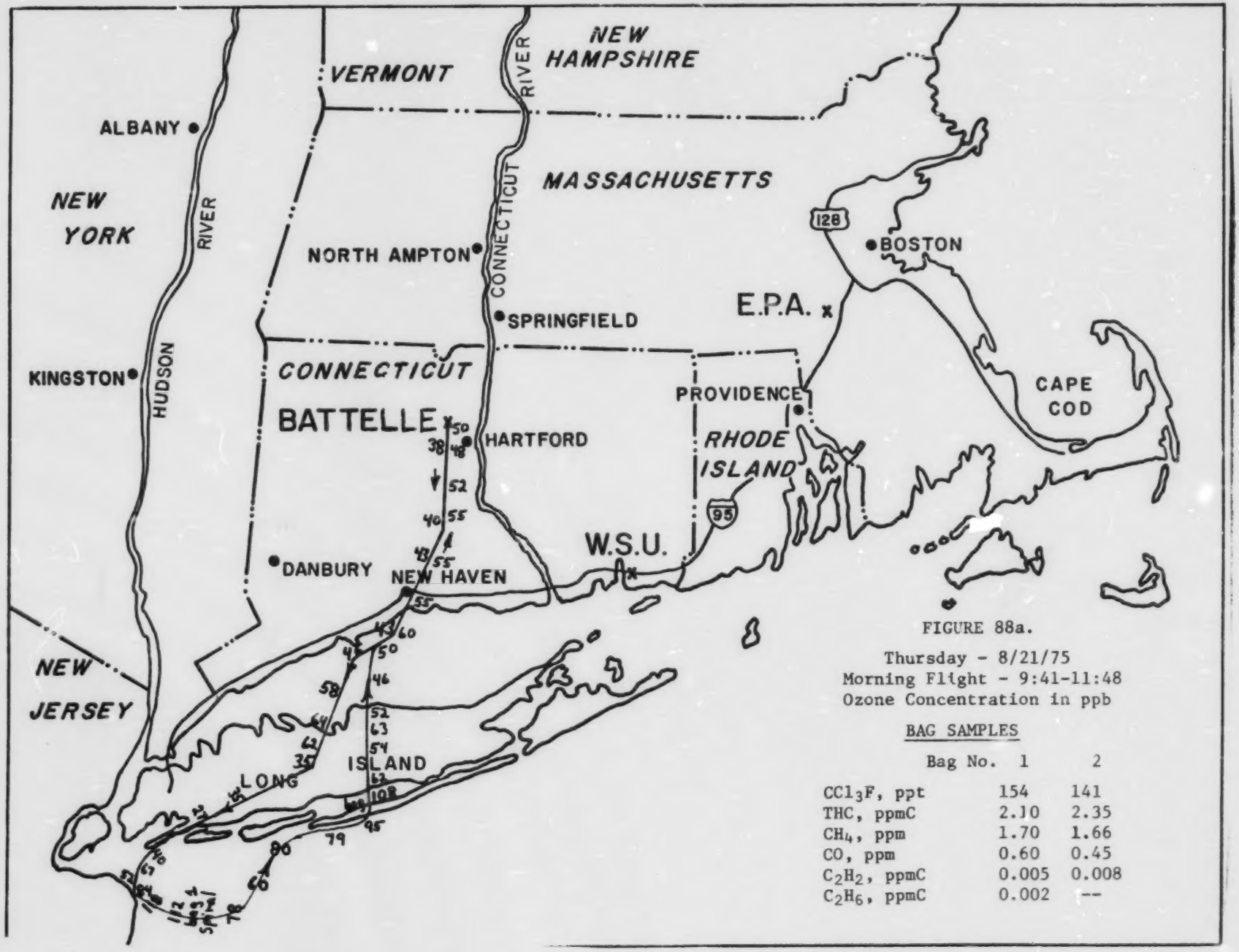


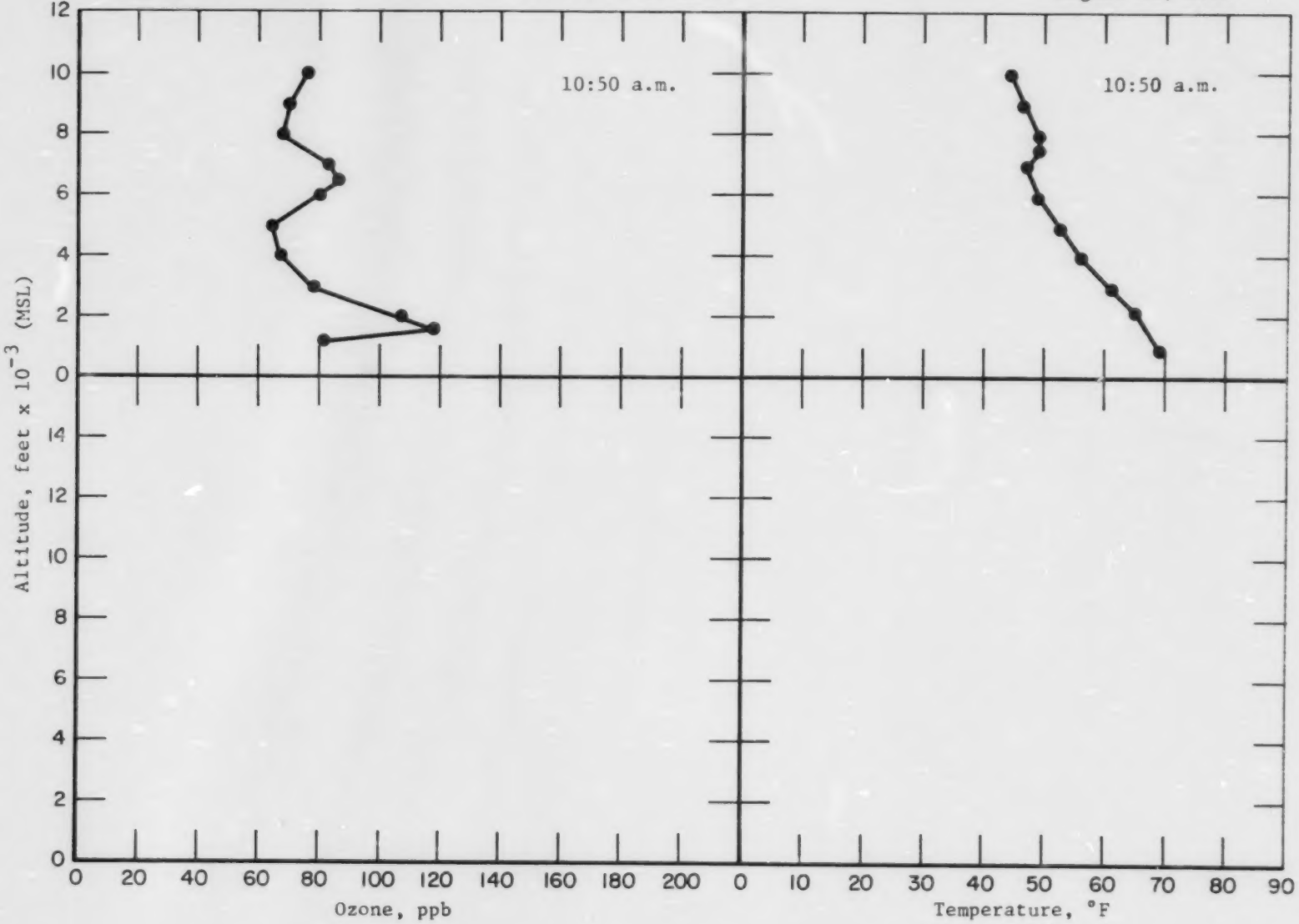
FIGURE 88a.

Thursday - 8/21/75
Morning Flight - 9:41-11:48
Ozone Concentration in ppb

BAG SAMPLES

Bag No.	1	2
CCl_3F, ppt	154	141
THC, ppmC	2.10	2.35
CH_4, ppm	1.70	1.66
CO, ppm	0.60	0.45
C_2H_2, ppmC	0.005	0.008
C_2H_6, ppmC	0.002	--

FIGURE 88b. Vertical Profiles August 21, 1975



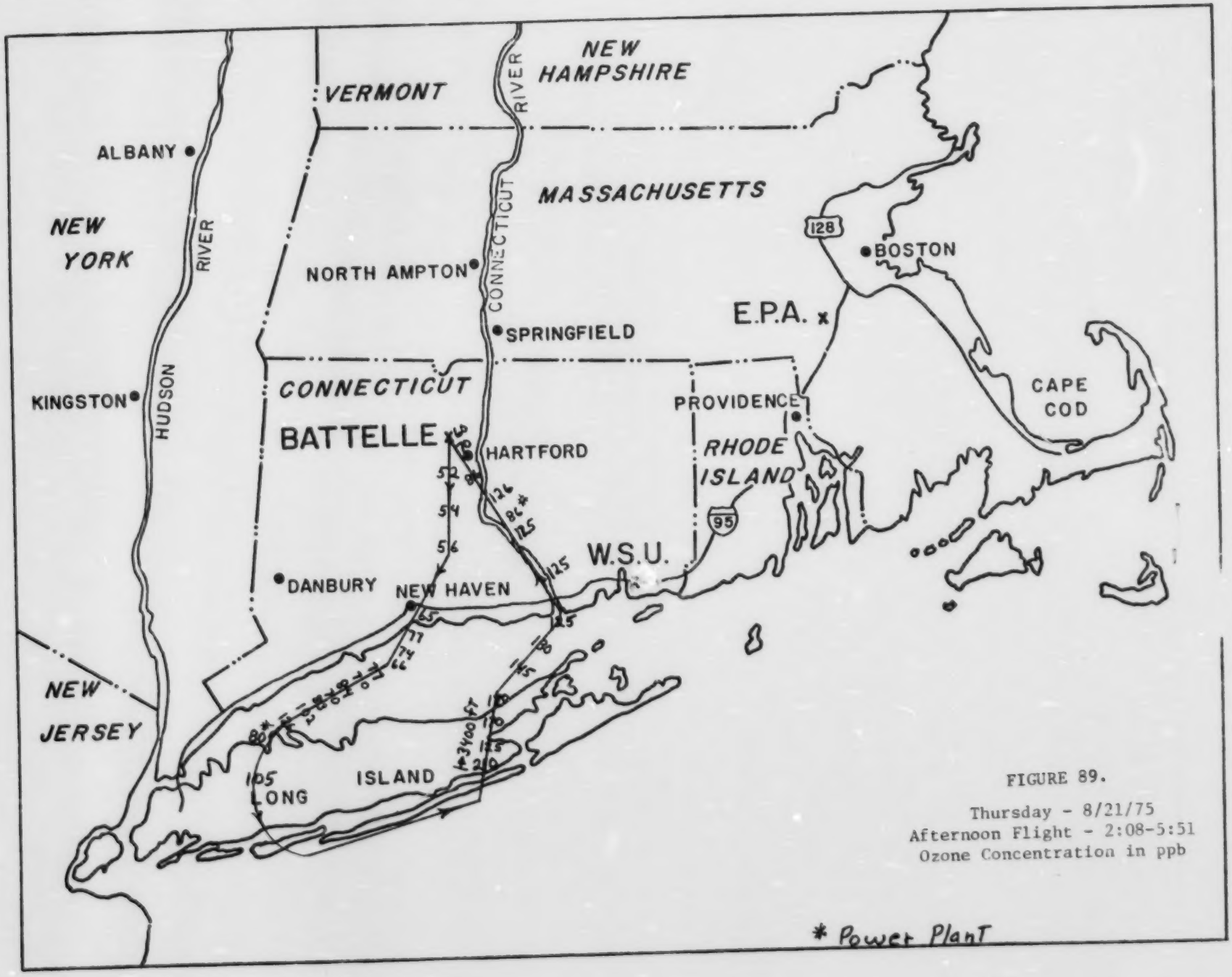


FIGURE 89.

Thursday - 8/21/75
Afternoon Flight - 2:08-5:51
Ozone Concentration in ppb